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Report of a Workshop on Expanding U.S. Air Force Noncombat Mission Capabilities

Carl Builder, Robert Lempert, Kevin Lewis, Eric Larson, Milton Weiner

Prepared for the United States Air Force

Project AIR FORCE

Preface

The rapidly changing nature of the international security environment presents the U.S. Air Force with the challenge of determining the spectrum of missions it may be called upon to carry out in the future. In response to this challenge, a project on expanding U.S. Air Force missions was initiated at RAND in November 1990 under the sponsorship of the Director of Plans, HQ USAF. The project was a multitask effort conducted in the Strategy and Doctrine Program of Project AIR FORCE, a federally funded research and development center.

One of the tasks of the project was to conduct a workshop on expanding U.S. Air Force noncombat capabilities. The workshop was held in RAND's Washington Office in June 1992. This report documents the results.

Because the workshop discussions highlighted a potentially divisive condition and raised fundamental questions about the purpose and use of Air Force capabilities, this report should be of interest to decision-makers faced with determining the future nature of the Air Force.

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Summary

This report describes a workshop on expanding U.S. Air Force noncombat mission capabilities that was held in June 1992 at the RAND office in Washington, D.C. This workshop was one part of a multitask project sponsored by the U.S. Air Force.

The original purpose of the workshop was to bring together individuals knowledgeable about past noncombat military operations and to identify desirable U.S. Air Force noncombat capabilities for the changing world of the future. "Noncombat operations" were seen as including reconnaissance, intelligence, airlift, humanitarian efforts, disaster relief, foreign forces training, etc., and any other operations that did not involve the direct employment of weapons.

The workshop had initially been scheduled for 1991, but was postponed because of the Desert Shield/Desert Storm operations. When it was rescheduled, its purpose was changed from a review of past operations to a discussion of four hypothetical future situations (scenarios) and the identification of significant future U.S. Air Force mission requirements and desirable mission capabilities. A group of 25 knowledgeable individuals, primarily military officers from the Air Force, attended.

The workshop began with two background briefings describing other aspects of the multitask project. The first briefing surveyed a number of measures related to the balance between Air Force combat capabilities ("shooters") and other capabilities ("nonshooters") over time. It illustrated that for a wide variety of measures, including vehicle inventories, flying hours, and budgets, the majority of Air Force programs fall into the nonshooter category. It also indicated how broad and diverse the nonshooter component of the Air Force is, as well as how stable the relationship between the shooter and nonshooter components has been in recent years.

The second briefing focused on a historical review of over 500 Air Force operations conducted from 1947 to 1989. It indicated that the Air Force has averaged about one noncombat operation per month since 1947 and that there has been enormous diversity in the size and scope of these operations. This briefing also presented a detailed analysis of some of the operations and identified lessons from them, including the uniqueness of the Air Force in

providing specialized capabilities and the shortcomings of infrastructure on the ground for most of the operations.

The two background briefings were followed by extended discussions of the four scenarios, each considered to be an exemplar of other possible situations:

1. A nuclear explosion in Tel Aviv
2. A revolt in Mexico
3. Ongoing piracy in the seas around Malaysia
4. Conflict in the Caucasus

These scenario discussions consisted of interactive exchanges between panels of workshop attendees and a moderator whose function was to stimulate and direct the discussions in a manner similar to that used by Professor Arthur Miller in the Public Broadcasting System series on Constitutional issues.[1]

For each of the scenarios, the workshop attendees were asked to assume the role of a special group convened at the request of the U.S. Air Force leadership to consider the range of noncombat, or support, options that the Air Force could provide to national leaders if requested. The group was to provide advice on any potential Air Force roles, missions, actions, operations, capabilities, or limitations relevant to the evolving situations.

Although there was no expectation that the moderated discussions of the four scenarios would define these roles, missions, etc., in detail (i.e., to the extent of developing specific plans or providing technical specifications or characteristics), it was anticipated that they could be outlined broadly enough to provide a basis for follow-up research. Some capabilities were identified, as described below, but what may be the most significant result of the workshop was on an entirely different theme.

In effect, the workshop discussions revealed considerable disagreement among the participants about the advisability of various degrees of American or U.S. Air Force involvement in each of the four hypothetical situations. This disagreement appeared to be symptomatic of an important and deep division within the Air Force (and probably within the other services as well) over traditional combat

[1]Fred Friendly, "The Constitution: That Delicate Balance," a television series prepared from the Columbia University Seminars on Media and Society, produced for television by the Public Broadcasting System, April 1982, June 1983, and October 1983, and moderated by Professor Arthur Miller of Harvard University, School of Law.

versus less traditional, noncombat missions. This divisive issue goes to the heart of what American military institutions should be about in the future.

On one side are those who argue that the Air Force should not make noncombat operations an explicit and planned mission area. They see no problem in the use of existing combat or combat support capabilities for noncombat operations, but they are strongly opposed to the Air Force dedicating any part of its training, force capabilities, personnel, or budget specifically to expanding or enhancing its noncombat capabilities. They hold that the basic mission of the Air Force is to fight and that emphasis on noncombat capabilities will reduce its ability to carry out this primary mission, particularly in an era when reduced budgets are already cutting into the Air Force's combat capability.

On the other side are those who argue that the Air Force must expand its concept of itself and its place in American society. It should embrace noncombat operations as an important and growing segment of its mission spectrum in an era when the demands on the Air Force will focus as much on its noncombat contribution to national policy as on its combat capabilities. Their view is that the nation's needs are changing and that, as a servant of the nation, the Air Force should broaden its vision beyond the traditional combat roles.

In fundamental terms, the division is about whether noncombat missions will become an integral part of the wave of the future or will seriously degrade U.S. combat capabilities and the profession of arms.

The major result of the workshop was thus the unexpected highlighting of this division and the underlying issue of what the Air Force of the future should be. It seems clear that this issue will have to be faced and resolved before the Air Force can focus constructively on expanding or improving its capabilities for noncombat operations in the future. If the Air Force does not resolve the issue for itself, it may be resolved through budgets and mandates from outside the Air Force.

Against this background, the workshop participants raised a number of other, related issues for consideration:

1. To what extent can some Air Force noncombat activities be carried out by nonmilitary organizations? These activities include transportation of supplies, personnel, and equipment by commercial carriers, and the use of private or nonmilitary communication capabilities.
2. In situations similar to the hypothetical ones of the workshop, to what extent will the Air Force and the U.S. operate under coalition arrangements in

which they are providing support and may not have the dominant role in the policy-making or command process?

3. To what extent may efforts by the Air Force to enhance its noncombat support capabilities be regarded as only another means of obtaining a larger share of the military budget?
4. To what extent can precrisis plans and arrangements be made for possible future noncombat support situations?

The participants also devoted some effort to defining in broad outline some desirable noncombat capabilities for the future:

1. The importance of having an adequate infrastructure for such operations, particularly in remote areas where facilities, communications, housing, medical, etc., capabilities are limited or nonexistent.
2. The importance of improved command, control, communications, and intelligence capabilities in remote areas or in situations necessitating coordination with local authorities, foreign governments, or armed forces.
3. The need for extensive psychological and civil affairs capabilities for dealing with situations in areas where not only a knowledge of the language is important, but also an understanding of the indigenous culture.
4. The value of specialized capabilities, such as nuclear detection and monitoring equipment (exemplified in the Tel Aviv situation), a large-scale decontamination capability (in the Tel Aviv situation), easily transportable and erectable mass housing (in the Caucasus situation), an airborne psychological operations communication system (in the Mexico situation), a traffic-monitoring capability (in the Malay pirates situation), and cooperative training programs in noncombat support operations with other nations.

While the workshop was only partially successful in identifying desirable future capabilities, it both highlighted the debate over the issue of emphasizing combat versus noncombat capabilities for the future and made clear to all participants the importance of the planning and discussion of noncombat operations for the Air Force. It also indicated that such planning and discussion can bring the debate over the advisability of specialized Air Force capabilities to the attention of higher levels of command, as well as into sharper focus.

This finding suggests the possible need for a multiphased Air Force program to focus the debate and take appropriate actions. The steps in the program could include the following:

- Establish an activity to plan U.S. Air Force actions for noncombat operations (in addition to what is done by component commanders).
- Have this activity define one or more potential noncombat support situations (scenarios) and plan an actual Air Force exercise based on the situation.
- Have an open discussion of the planning requirements and the proposed exercise with the relevant Air Force commands and other military and civilian agencies as a determinant of the actual conduct of the exercise.
- As appropriate, have the planning activity periodically prepare a situation scenario, an operational plan, and an exercise plan.

Such a multistep effort could provide ample input to the Air Force leadership for decisions on the extent to which noncombat operations should be an explicit, integral, and significant component of future Air Force operational capabilities. Such a program could be valuable in resolving the serious debate within the institution in a period of changing demands and budgets.

Acknowledgments

Workshops such as the one reported here result from the contributions of many people. We are especially appreciative of the efforts of Cathy Jensen of RAND, Santa Monica, and of Linda Tanner and the support staff in RAND's Washington Office. We are also indebted to our many RAND colleagues who participated in the "dry run" of the procedure and scenarios in Santa Monica prior to the workshop in Washington, as well as to our colleagues who participated in the post-workshop seminar on the uses of air power in Yugoslavia.

We also wish to thank Janet Deland and Jeri O'Donnell for their timely assistance in organizing and editing this manuscript, and Bill Schwabe for his careful and constructive review of the entire publication.

Finally, four of us would like to acknowledge our co-author, Milt Weiner, who conceived, organized, and produced the workshop documented here. Without his vision and perseverance, we would have had nothing to document.

1. Introduction

The first use of the airplane in military operations was for aerial observation. This "noncombat" role (i.e., a role that did not involve the employment of weapons) has since expanded to a host of other activities encompassing direct combat operations as well as combat support operations, such as airlift of equipment and personnel, aerial refueling, communications, gathering of weather data, and "show-of-force" operations. The capabilities and equipment developed for these combat and combat support operations have also contributed to a number of other types of operations, such as disaster relief, humanitarian aid, and personnel evacuation.

With the changing international environment, in part related to the events in Europe and in the former Soviet Union, the trends in the military, political, economic, technological, and demographic areas portend major changes in the security environment. These will impact the nature, kinds, and circumstances for employment of the aerospace combat and support power of the U.S. Air Force, as well as of the other services.

In response to these changes, a project on expanding U.S. Air Force missions was initiated at RAND in November 1990 under the sponsorship of the Director of Plans, HQ USAF. It was motivated not only by the rapidly changing nature of the international security environment, but also by the prospects for significant changes in the spectrum of missions that might be assigned to the Air Force in the future. Even before Operation Desert Storm, it was evident that noncombat missions might be expanding in numbers and kinds, despite the drawdown in the force structure caused by shrinking military budgets. Among the reasons for this expansion are the following:

- The infrastructure gap between the most and least developed nations appears to be widening instead of closing, and the projection of force into many areas of the world will require an increased projection of infrastructures essential to supporting military operations with modern weapon systems.
- The frequency and scope of human disasters appear to be increasing with the world's population growth, particularly where overcrowding is forcing more people to live on marginal lands or in vulnerable areas of the globe.

- Peacekeeping operations may increasingly call upon the widely recognized American proficiencies in technical and logistical support of coalition military operations. In some of these operations, the U.S.'s combat forces may not be requested or acceptable as often as its unique capabilities for surveillance, communications, and logistics.

The project was conceived as a focal point for RAND research aimed at anticipating some of the long-term changes that may be required within the Air Force if it is to meet the nation's needs for an expanding and shifting spectrum of operational capabilities pertinent to future noncombat missions (i.e., all missions that do not involve the delivery of ordnance onto targets). The specific objectives of the project were to

- Explore the scale and scope of future Air Force support missions.
- Identify the Air Force's required operational capabilities, both quantitative and qualitative, for future support missions.
- Develop concepts and plans for the evolution of the spectrum of Air F. operational capabilities needed for future Air Force support missions.

The workshop on expanding U.S. Air Force noncombat capabilities was designed to contribute to those objectives by "pushing the intellectual envelope" of Air Force support capabilities in two ways:

1. By considering some hypothetical future situations (scenarios) that could involve noncombat Air Force operations.
2. By identifying some new or significant future mission requirements and desirable mission capabilities.

Preworkshop project research into the character of past and future Air Force support missions included the following areas of inquiry (the first two of which were summarized for the workshop participants in the introductory briefings described in Sections 2 and 3):

1. Analyses of past Air Force operations for historical trends in the scale, scope, and character of support operations as compared with combat operations.
2. Case studies of past Air Force projections of air power in noncombat support missions.
3. Development of scenarios that are likely to stress current and future Air Force capabilities for support missions.

4. Analyses of world trends for evidence of changes in the qualitative and quantitative demands for Air Force capabilities in support missions.

To date, these inquiries have reinforced the view that the trends in international developments—political, economic, military, technological, demographic, etc.—all portend significant changes in the future security environment and hence in the requirements for aerospace power projection. The changes are not only in the *places* where power must be projected, but also in the *kinds* of power to be projected and the *circumstances* under which it can be projected.

The projection of air and now aerospace *power* has typically been viewed as the projection of *force*, along with essential supporting elements. Indeed, the terms *power projection* and *force projection* are frequently used interchangeably. But power projection has always involved two components—force and infrastructure—in varying degrees of balance, and the long-term trend appears to be toward infrastructure. As combat aircraft and air and space operations have become more capable and sophisticated, the infrastructure component of aerospace power projection has grown in importance and size; not just on the ground, but in the air and in space as well—and not just as support for the force component, but increasingly as an independent component of power projection, as in the Air Force operations over the Persian Gulf during the Tanker War of 1987–1988 (Operation Earnest Will) and in the Kurdish relief operations during 1991 (Operation Provide Comfort).

Although the size of the strike forces is likely to decrease during the decade ahead, the missions involving the rapid projection of infrastructures (transport, communications, surveillance, rescue, medical, humanitarian assistance, civil emergency, and security) are likely to increase disproportionately. World trends are pointing toward an accelerating need for rapid projection of security and civil infrastructures of all kinds (particularly into the less developed regions of the world), quite apart from the future prospects for combat operations.

Evidence of that trend can be seen in the three largest theater or tactical airlifts conducted during 1991, one of them as an integral part of Operation Desert Storm. As Table 1.1 shows, two Air Force humanitarian and relief operations carried out in 1991 were comparable, by any measure, to the tactical airlift required to support Desert Storm's "left hook" (i.e., the movement of substantial ground forces to the left flank as part of the initial operations plan).

Determining precisely where the Air Force's noncombat capabilities might fall short in the future, qualitatively or quantitatively, was a major objective of the scenario explorations undertaken in the workshop.

Table 1.1

Three Theater Airlifts During 1991

Airlift Operation	Sorties	Passengers	Cargo (tons)
"Left hook" in Desert Storm	1,175	13,843	9,395
Kurdish relief in Provide Comfort	1,100	14,421	40,000
Mt. Pinatubo evacuation in Fiery Vigil	1,726	23,400	44,440

SOURCE: Donald B. Rice, *A New Air Force: Reshaping for the Future*, undated testimony of the Secretary of the Air Force during 1992, pp. 20, 25.

The agenda for the workshop included a brief summary of two of the other activities of the RAND project to provide relevant background material: a historical review of Air Force force structure and a historical review of Air Force noncombat operations. This summary was followed by extensive discussions of four hypothetical future situations, or scenarios. A moderator led these discussions and interacted with the workshop participants as a means of expanding the considerations of Air Force operations beyond current missions and capabilities.

To achieve a broad representation of individuals with experience and interest in noncombat operations, approximately 30 people were invited to attend the workshop. These included not only Air Force officers from a variety of backgrounds and different commands, but officers of the U.S. Army and U.S. Navy and staff members of several offices of the Secretary of Defense and the White House.

A list of the attendees and their organizational affiliations is presented in Appendix A; the workshop agenda is presented in Appendix B.

This report summarizes the two historical presentations, the workshop procedure, and the discussions of the four scenarios. It also presents a series of observations and conclusions based on the workshop discussions.

2. Trends and Indications from the Historical Record

Introduction

As the nation grapples with the problem of downsizing its "Cold (or Global) War" military establishment, much attention is being focused on the U.S. tactical air forces. While recent experience suggests that tactical aviation will continue to be a cornerstone of U.S. military capabilities, many point to the fact that combat aviation is very expensive. Doctrinal debates are also brewing over the role of air power in future contingencies, which may not follow the strategic or operational lines postulated in planning to defeat the large conventional capabilities maintained by the Soviet bloc. The combination of many factors—the critical role to be played by air power in some contingencies, its high cost, and uncertainty about necessary future military capabilities—leads to questions about the future role of different kinds of aerospace instruments in aviation posture planning.[1]

This project has addressed many aspects of the evolving roster of possible undertakings with which the Air Force might find itself tasked in the future. The work has focused in particular on the so-called noncombat missions, tasks, functions, and capabilities that the Air Force might maintain or be called upon to provide in the evolving global environment. To set the stage for later sections, we provide here some general background data and commentary on trends of interest related to the balance between combat and noncombat activities within the overall Air Force program. Put simply, if one takes as a hypothesis the proposition that the Air Force may find itself increasingly involved in noncombat

[1]No one denies that U.S. combat air power played a central role in the decisive defeat of Iraqi forces. As a means of substituting technology for manpower, offensive air operations made possible the relatively quick, as well as decisive, destruction of organized Iraqi resistance. In addition, the success of the total coalition air campaign undoubtedly played a vital role in holding friendly casualties to levels that, in retrospect, seem remarkably low. But the lessons of this success are not lost on many viewers around the globe. While the U.S. must retain the potential to defeat a large conventional threat, future adversaries may pursue asymmetric strategies intended to undercut the role that might be played by technologically superior U.S. air forces. In addition, as events in Bosnia, Somalia, and other troubled regions illustrate, U.S. military forces may increasingly be involved in situations in which the destruction of traditional adversary forces is not an objective. No one can say which model of future operations is the best one to use for planning purposes, especially given declining budgets, but the uncertainties surrounding the changing planning environment only exacerbate the more traditional controversies involving combat aviation.

roles, it is helpful to know something about the priorities, costs, and levels of effort that have been invested over time in various pursuits. Accordingly, we briefly review trends in the large-scale Air Force program, using historical data on force structure, budgets, and other measurable "outputs" of the Air Force program.

Brief Remark on the Definitions, Concepts, and Aims of This Section

As anyone familiar with the available data knows, it is next to impossible to paint a decisive portrait of the changing emphasis accorded over time to what might be called combat and noncombat missions, tasks, etc. Not only are the data not organized in this fashion, it is probably logically and conceptually beyond reason to expect that any such clear-cut and meaningful distinction could be drawn in the first place. Nonetheless, it is possible to highlight some interesting trends that do make the point that noncombat capabilities represent an increasingly important priority so far as U.S. Air Force priorities are concerned.

To undertake this task, it was necessary to develop some admittedly generalized and not entirely satisfactory indicators and definitions. These steps were taken in full recognition of the fact that the indicators used may be confusing or tendentious to those inclined toward overly literal interpretations of the terminology employed, or to those who feel uncomfortable with somewhat blurry and ambiguous taxonomic schemes. Nonetheless, in selecting the indicators, three general notions are advanced:

1. We make rather loose distinctions between combat and noncombat forces—i.e., between "shooters" and "nonshooters." We take shooters to mean those force elements that have traditionally been engaged in direct combat operations against like enemy forces. For the Air Force, shooter forces mainly consist of fighter/attack (tactical) forces, bombers, and a few other types of forces. Nonshooters include mobility, intelligence, and other such forces. The shooter/nonshooter distinction goes beyond pure force structure, moreover, to include various components of the nonflying Air Force that perform special duties including (but not limited to) the support of flying units. In short, the shooter part of the Air Force refers to the part that is designed, organized, intended, and equipped to engage in direct combat with enemy forces, whereas the nonshooter part comprises (depending on what we are measuring) the complement of the Air Force program. We fully acknowledge that this distinction, like military operations themselves, is fraught with ambiguities and overlapping areas. For example, certain forces

(such as some reconnaissance aircraft, forward controllers, or search and rescue forces) may operate in the thick of a combat environment but are not intended to directly engage enemy targets and thus are not considered shooters. This choice of terminology and the nature of this distinction may leave much to be desired, but they have made at least intuitive sense to most participants in this project and in the workshop, and they are necessitated by the fact that the data happen, for better or worse, to be organized along such lines.

2. Even allowing for alternative definitions, the fundamental results discussed in this section still vary only in degree. For instance, adding or removing various force elements (e.g., manned reconnaissance aircraft) or changing the categories in other ways has no effect on the major conclusions one might draw from the available data.

3. Using the data available, measurable and meaningful trends can indeed be seen. These trends may seem rather modest to some, but they take on significance in light of the fact that they reflect a common planning context. It is indisputable that, over the past several decades, improving relative U.S. combat capabilities vis-à-vis those of the Soviet-led military coalition has been the dominating theme of overall U.S. national security resource allocation priorities. A trend existing within that context, particularly one that suggests that the outputs of the Air Force program have been slowly moving away from a concept driven essentially by a combat orientation, is therefore noteworthy on its own merits. So far as the historical record goes, moreover, it does not really matter whether this movement has been the result of deliberate choice or any other influence; for better or worse, the data detail what has actually happened.[2]

Before proceeding with a discussion of the data, we would like to address a question that may arise for the reader: Why bother in the first place with distinctions along the lines of those proposed so far? After all, at one level the distinctions seem somewhat moot, and they are distinctly unfashionable. For instance, the Gulf War demonstrated how important to prevalence in a no-nonsense "shooter vs. shooter" conflict the Air Force's noncombat capabilities were at every point. U.S. combat excellence would have meant nothing without the vast array of mobility, communications, intelligence, electronic warfare,

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[2]Whether the trends and discrete events discussed in this section have taken place as the result of deliberate action or pure chance may raise important questions for the future about the desirability of continuing to approach planning problems as has been done in the past. But the undesirability or even circumstantiality of historical developments takes nothing away from the basic fact that they did indeed take place.

refueling, and other resources on hand in large numbers. At the other end of the spectrum, even relatively pure "peacekeeping" and "humanitarian" operations are inseparable from some combat dimension: technical, organizational, and legal distinctions aside, the United Nations and the U.S. government have elected to call upon the military to serve in part because of the fact that readily available combat capabilities wait in the wings to ensure and, some might say, enforce an environment of order and semistability within which more positive tasks might proceed.

These realities aside, the reasons for bothering to distinguish in planning between shooter and nonshooter capabilities rest upon certain facts that are both practical in their day-to-day significance and of more profound importance as far as the process of Air Force planning is concerned over the long haul. Whatever one thinks about the categorizations used in this section, the fact is that decisions are continually made about where to invest available Air Force resources. Because the planning system has traditionally made its own de facto distinctions between combat and other capabilities, the balancing act between them is of more than academic interest. More conceptually, to adjust in more fundamental ways to the needs of a changing global environment requires the replacement or modification of the existing planning system. The defense establishment's choices along these lines in general, and those of the Air Force in particular, will have major repercussions for the evolving utility of the U.S. military institution in a changing world, for the military's relevance in that world, and, in turn, for the strength of the military's justifications that it can provide services that are worth the continuing investment of increasingly tight national resources.

What Conventional Wisdom Suggests

Among the many key "lessons" of the Gulf War was the fact that an effective air power establishment is more than just a roster of combat units. The U.S.'s operational success owed much to the contributions of what have been characterized traditionally as support, or noncombat, resources—i.e., those resources that are not actually shooters. Deliberations on the future configuration of U.S. aviation reflect a relatively "holistic" approach to planning.[3] Even so, judging from recent discussion, misconceptions abound about the relative place of these nonshooter forces in U.S. planning. The purpose of this section is to survey some quantifiable indices of the shooter/nonshooter

[3]One need only compare the priority accorded supporting, nonshooter, resources in today's planning with that, say, of the Vietnam era to see how much more sophisticated a view U.S. planners do seem to have regarding the size and mix of U.S. air forces.

balance in U.S. aviation plans and forces over time. To provide a basis for subsequent discussion, it is useful to review some force, budget, and other priorities and trends.

At first glance, it would seem that the "prevailing wisdom" should give some clues about the ultimate answer to the question of large-scale priorities. For instance, it has been alleged by many that the combat capabilities, the shooters, are by far the Air Force's priority when it comes to decisions about what is to be underwritten financially. It is also held by some that there should be a direct relationship between the size of the total budget and the scale of U.S. combat forces. Critics of weapons and force decisions also have alleged that biases in planning lead to an overly narrow combat-oriented configuration of capabilities. All in all, it seems as though many people view the noncombat part of the Air Force's (or other services') posture as a sort of slack variable. When budgets permit or when immediate external requirements so demand, efforts may be invested in noncombat capabilities. But under more typical conditions, noncombat capabilities are invariably the casualties of "combat-centric" service planning priorities.

While such allegations may be appropriate in particular cases, examination of more general trends over an extended historical period paints a rather more complex and inconsistent picture. To see this, it is useful to review the Air Force posture and budget over the long run using various aggregate indicators. Figure 2.1 shows a variety of "outputs" of the total Air Force effort that relate to the posture as a whole: total active inventory (TAI) of aircraft, numbers of units of given types, personnel levels, flying hours, etc. A rather surprising finding emerges: There was an extended period between the end of the Vietnam contingency (i.e., from the mid-1970s) and the beginning of the post–Cold War drawdown that one might describe as highly stable. In terms of various overall metrics, one might say that "natural" levels of activity have existed.[4]

This fact is particularly notable in light of the line on Figure 2.1 describing the Air Force budget over time. It shows that an overall Air Force program stability has existed *despite* striking fluctuations in the Air Force budget. Establishing how a period of relative stability in posture outputs was arrived at and why that stability persisted despite substantial shifts in the Air Force budget leads to an

[4]As the reader familiar with any or all of this historical epoch knows, however, within these overall measures, one will find considerable internal dynamism. In other words, the procurement of different types of force elements, the strategic orientation of the Air Force at various times, and the like are subject to considerable change over time, some of it evolutionary and gradual, some of it abrupt and discontinuous. Yet the overall pattern of stability remains.

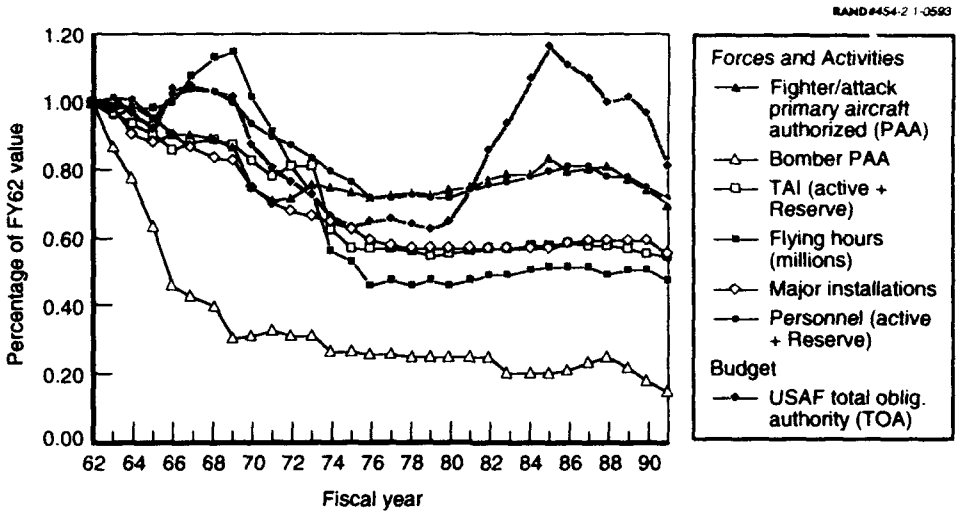

Figure 2.1—At Aggregate Levels, the Air Force Program Demonstrates Convergence

understanding of the real relationship between shooters and nonshooters in the Air Force program.

Combat Capabilities as a Component of the Air Force Program

The introduction to this section noted that our choice for a definition of *shooter*, or *combatant*, turns out to be independent of the metrics we might select to evaluate the relative priority of these capabilities within the Air Force program as a whole. Figure 2.2 demonstrates this independence in several ways. First, the priority we accord shooters varies according to the budget definition we use, but overall patterns of stability at aggregated levels exist here, too. Second, even for the broadest definition of shooter, one sees that in the modern defense planning context (that which followed the changeover from a strategic concept oriented toward the "massive retaliation" strategy to one hinging on "flexible response"), the nonshooter part of the budget (defined as the complement of the definition of shooters) never falls below half of the total Air Force budget. Indeed, when a relatively refined measure of the true shooter-related budget is used (the lowest of the three lines), it shows not only that these entities make up only about one-fifth to one-fourth of the total budget, but that the overall trend over the past couple of decades in the shooter part of the budget has been generally a modestly downward one.

Which of the lines in Figure 2.2 best describes the true Air Force shooter "level of effort"? The top line gives the Planning, Programming, and Budgeting System

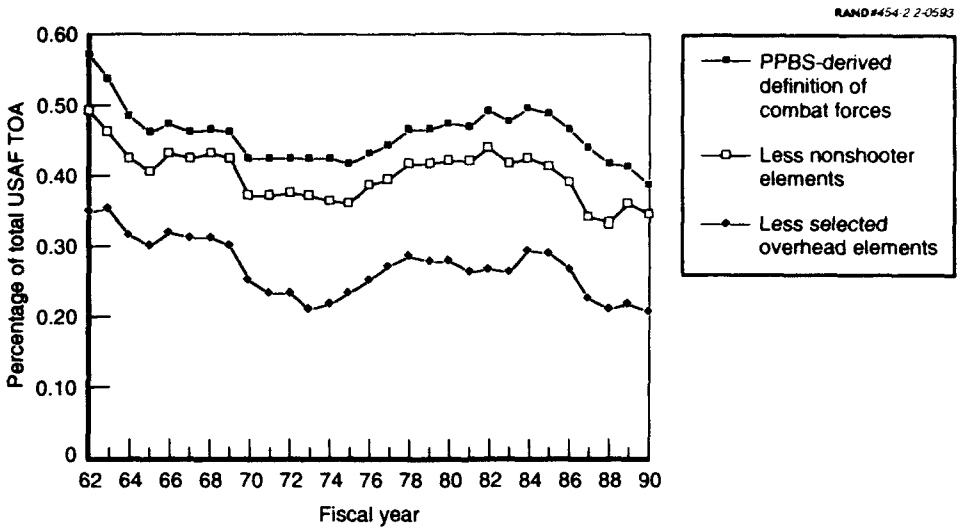

Figure 2.2—Within the Total Air Force Program, Shooters Represent a Reasonably Stable Part of the Total Effort

(PPBS) Major Force Program (MFP) share of the overall Air Force budget for combat forces—MFPs I and II, their Guard and Reserve analogues, and a few other odds and ends. Yet this MFP-based definition includes many forces and activities that are distinctly noncombatant in nature, ranging from various supporting force structure elements (such as Airborne Warning and Control Systems [AWACS] aircraft and aerial refuelers), to certain non-force structure capabilities (such as early warning and intelligence support), and to various personnel, training, and other support activities. The second of these lines removes the most obvious noncombat force structure elements noted (such as AWACS aircraft), whereas the third cuts out not only these, but also various support, infrastructure, and related "cost of doing business" undertakings (running air bases and the like). To be sure, all of these activities are integral to an effective shooter posture, but their costs and the way they are conceived of for planning purposes are often subject to different rules and processes than are those for shooters.

In any event, regardless of any preferred definition, some basic points remain: Nonshooters are important, they cost a lot (at least half of the Air Force budget), and they seem overall to be growing.

To summarize the statistics, then, depending on one's definition, Air Force shooters account for or amount to

- 15 to 40 percent of the total Air Force budget
- 25 to 35 percent of the total inventory of Air Force aircraft (TAI)
- 25 to 40 percent of total Air Force personnel slots
- 33 to 40 percent of all Air Force flying hours
- 35 to 40 percent of all Air Force flying squadrons
- 35 to 60 percent of procurement budgets (excluding modifications and various support costs).

Relative Priorities of Air Force Combat and Other Capabilities

Figure 2.3 highlights the degree to which the Air Force program is concerned with nonshooters. It is a listing of operational forces primarily intended to "support" combat. However, lest these capabilities be regarded as the necessary cost to sustain a posture that at its heart has other priorities, Figure 2.4 shows the evolution of the total Air Force inventory of aircraft (including active as well as Reserve components).

The earlier observation about the post-Vietnam stability of the total Air Force effort holds true here also. The mix of types and th. total inventory of aircraft in

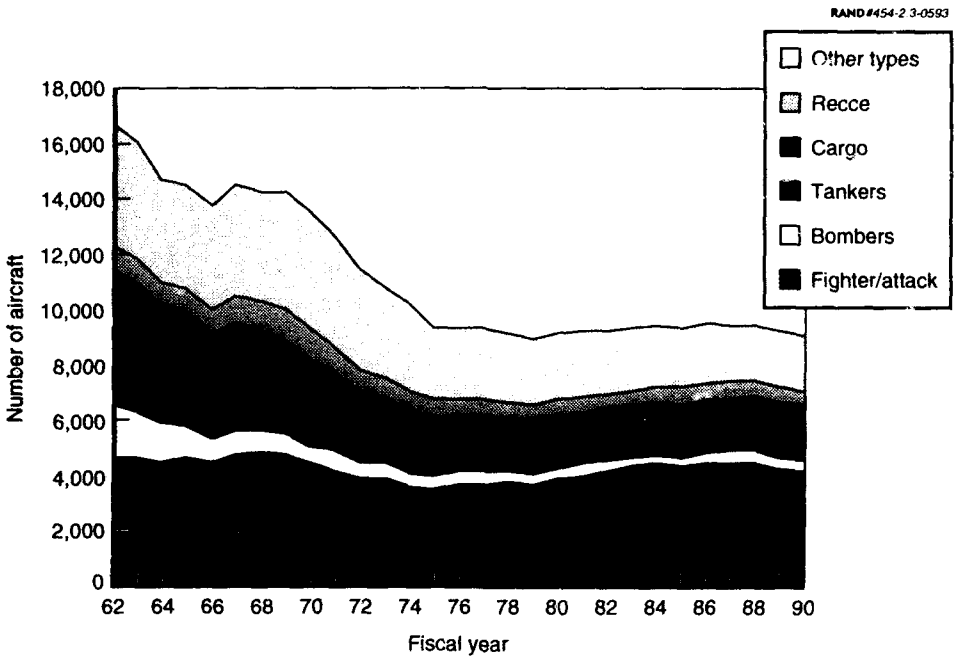

Figure 2.3—Evolution of Air Force Inventory (Active/Reserve TAI)

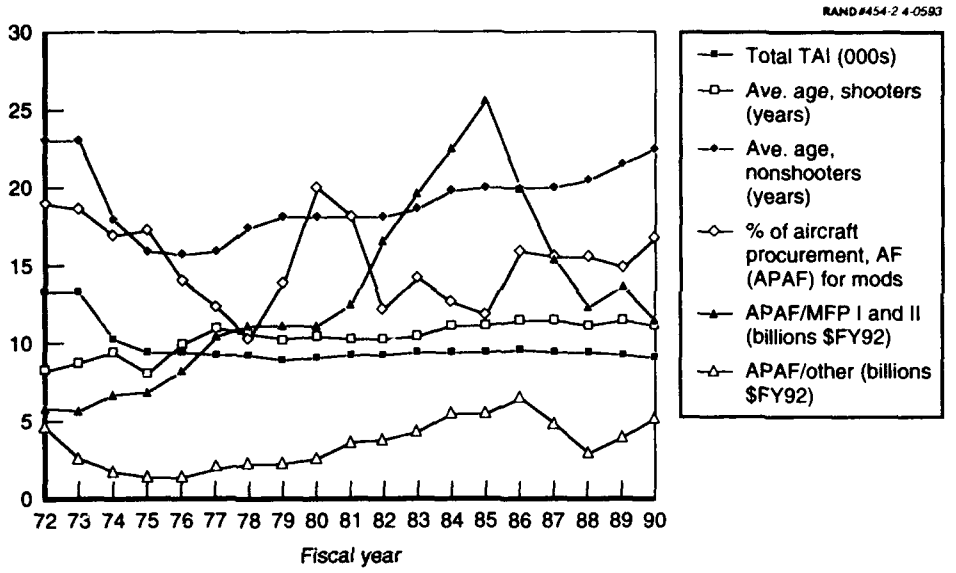

Figure 2.4—Some Crude Indicators of Air Force Investment Priorities, FY72–90

the posture tend to remain relatively constant from the mid-1970s until the end of the so-called Cold War planning period.

This picture of stability belies a considerably more volatile planning environment, however—one with implications for the stability of the shooter vs. nonshooter balance. It is well known that the costs of maintaining a fixed military force structure have tended to grow in real terms over time from generation to generation. However, the same sorts of problems have bedeviled the nonshooter part of the posture, sometimes to even more serious degrees. How is the stable relationship of shooters to nonshooters maintained in light of such influences, which act differently (and at different times and at different rates) on various force elements? In general, many of the most important initiatives pursued by the Air Force over the past couple of decades have fallen into the following categories. Each of these compensatory strategies and other techniques has some relevance for the shooter vs. nonshooter balance.

- Transfer roles and missions from combat to noncombat force elements.
- Design and implement non–force structure substitutes for force structure, whether shooter or nonshooter in nature.
- Substitute superior quality and other capability multipliers for quantities of force elements.
- Enhance the overall "productivity" of systems, capabilities, and activities by modernization in lieu of replacement or new procurement; by improvements

in constituent subsystems and supporting infrastructure; by capability multiplication via training, logistical, and other enhancements; and so on.

- Diminish other pressures to replace forces in kind and expand, as required by external developments, the Air Force's mission résumé by such efficiency measures as reduction of attrition, life extension, use of posture "surrogates," etc.
- Transfer missions and tasks from active to Reserve components, from military to civilian responsibility, from personnel to equipment-intensive activities, etc.
- Adjust strategy, doctrine, plans, and other concepts in ways that relieve pressures on posture maintenance demands (including such techniques as doubling up on roles, or even abandoning some missions).

This by no means complete listing of historical initiatives is particularly important in the case of U.S. noncombat forces for many reasons. A review of other data—for instance, aircraft procurement quantities, as shown in Table 2.1—indicates an apparent emphasis on combat forces. It is true that many nonshooter aircraft have not historically been procured as the result of peacetime service requirements that are implemented on an orderly basis.[5] Indeed, large "chunks" of the nonshooter aircraft inventory resemble a quilt of sorts, i.e., a

Table 2.1

Historical Air Force Procurement of Aircraft: Shooters vs. Nonshooters

	Average for Groups of Fiscal Years				
Aircraft[a]	62–64	65–72	73–79	80–88	89–92
High-end shooters	119	64	88	30	35
Low-end shooters & multirole fighters	220	256	103	187	122
Combat recce types	38	49	0	0	0
High-end nonshooters	114	71	5	21	6
Low-end nonshooters[b]	354	260	13	36	63

[a]Illustrative types for each group:
High-end shooters: F-15E, F-111, F-117
Low-end shooters and multirole fighters: A-7, A-10, A-37, F-16
Combat recce types: RF-4C
High-end nonshooters: C-5A, E-3A, TR-1, E-4B
Low-end nonshooters: C-12, C-23, T-37, T-1A.

[b]This group mainly consists of liaison, utility, some training, and other related types. Excludes aircraft procured for the Civil Air Patrol, some R&D types, and a few other assorted items.

[5]Like such other service cases as amphibious lift, mine warfare, and strategic sealift capabilities, many nonshooter platforms are often procured only when an explicit and compelling need for them arises (as with, for instance, O-2s and OV-10s during the Vietnam years).

collection of bits of posture acquired at different times as a result of specialized and compelling needs for particular types of aircraft (KC-135s from the days of the large B-52 fleet; observation, forward air controller [FAC], and special operations aircraft of some types procured on the stimulus of specific contingencies; etc.). However, an interesting question remains as to whether this historical record—which tends to become less conclusive with the passage of time—reflects a deliberate Air Force set of priorities concerning force structure planning or is more indicative of the nature of the planning process.

Some light can be shed on this issue by examining the historical emphasis that has been placed on the procurement of new aircraft vs. the modification, upgrading, and life extension of old airframes. Fighter-attack type airplanes, to take the most noteworthy example of an apparently higher Air Force priority, face not only the realities of advancing technology and cost, but also adversary initiatives and, periodically, new mission requirements that may render relatively marginal fixes unsuitable either from a technical or a budgetary perspective. Historically, nonshooter aircraft often have not faced the same environmental demands.[6] By their nature, many nonshooter aircraft are also more suitable from a variety of perspectives when it comes to upgrading and modernization initiatives. Cargo and transport-derivative aircraft, for instance, have the space and weight potential to handle the installation of new systems better than do most densely designed combat aircraft. For these reasons, the fact that the U.S. has historically invested more in the direct replacement of combat forces—that shooters have had, in other other words, higher procurement priorities when it comes to new aircraft production—may to some extent reflect a higher Air Force priority for such systems in an overall sense, but one should not jump from statistics on aircraft buys alone to the conclusion that noncombat forces have been or necessarily are a second-rate stepchild within the total Air Force posture.[7]

Figure 2.5 provides a few indicators that are suggestive of Air Force investment priorities over the period FY72–90, a historical epoch that included a phase of relative investment "privation," as well as one in which substantial funds were available for aircraft purchases. One thing suggested by this figure is that overall

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[6]There are many exceptions to the rule, however, such as the requirement that the C-17 be able, unlike its predecessors, to operate from forward bases, including more spartan facilities closer to fighting. One consequence of this requirement has been the need to introduce numerous costly and technologically stressing capabilities into the airframe and various aircraft systems. Likewise, the potential requirement that KC-135s be able to refuel bombers at low altitude comes with a price tag in terms of greatly accelerated system wearout.

[7]Finally, the tendency of aircraft costs to grow has been a problem that has afflicted shooters relatively more than nonshooters over time, though recently more and more noncombat aircraft are, as a result of their capabilities or other factors, very pricey items in their own right.

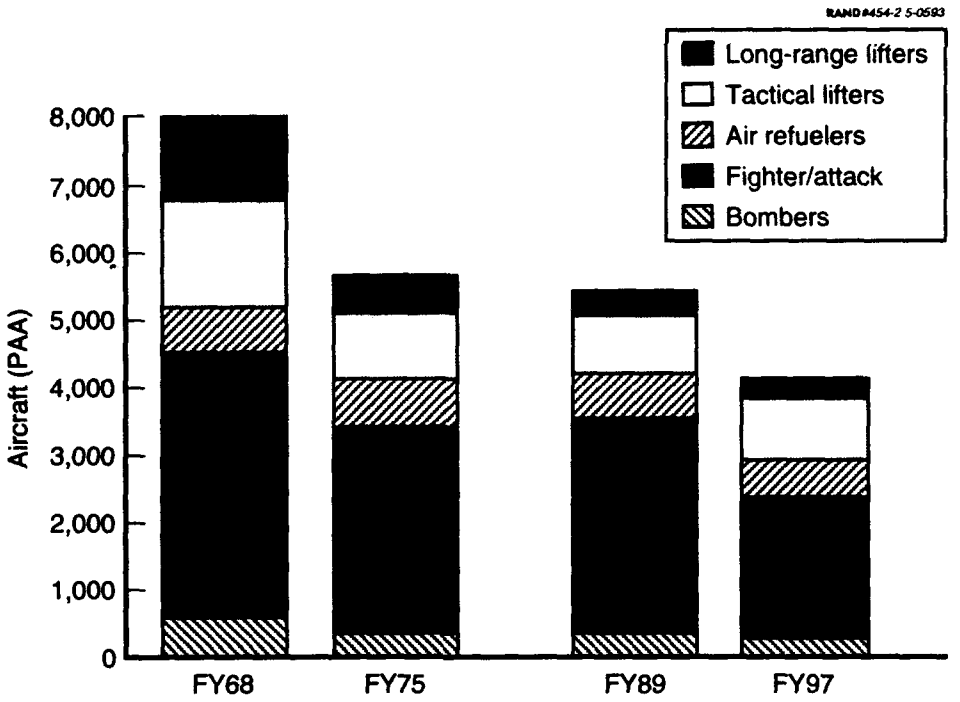

Figure 2.5—The Outcome of Two Force Drawdowns: Relative Air Force Posture Priorities (Selected Force Components)

TAI remained roughly constant over the whole period (following an initial decline associated with the post-Vietnam drawdown) at about 5,500 aircraft of the types shown. Additional points, from a more detailed assessment of the historical data, are that

- The funding available for aircraft (APAF) in MFPs I and II (strategic nuclear forces and general-purpose forces) was larger than that in all other MFPs and increased disproportionately when overall funding levels permitted.
- Funding for modifications, which prior to this period corresponded in a more decisively indirect way to total investment budgets (i.e., modifications grew in their total value when total budgets declined, reflecting the need to modify in lieu of making new procurements), apparently was more and more independent of the total budget situation, which to some degree bespeaks the inherent advantages of many upgrades regardless of total resource availability (and undermines the theory that one only follows this course when poverty demands it).
- The average ages of shooters and nonshooters in the inventory reflect both Air Force procurement policies and the often great suitability of many noncombat platforms for modification (as well, in many cases, as the

inherently longer lifetime of many nonshooters, which are not subject to the same operational stresses and maintenance-cost phenomenologies as shooters). We see that after a sharp decline (mainly a consequence of the retirement of older systems and many Vietnam War-related nonshooter forces, such as large FAC and tactical air control system [TACS] fleets), the average age of the total nonshooter inventory rose steadily beyond 20 years. In contrast, shooters held fairly constant at something over 10 years, which is largely a function of fighter-attack aircraft procurement (given the fact that some combat airframes, notably B-52s, continued to age steadily over the course of this interval).

A final significant observation concerns the relative emphasis accorded to the combat and noncombat force structures in the Air Force program as the present drawdown from peak 1980s budget and force levels proceeds. The priority accorded to various force components in the present downturn is quite noteworthy in differing from the priorities exhibited in the two preceding major budget downturns (those following the Korean and Vietnam wars) in that it places an unprecedented emphasis on the preservation of nonshooter force structure even as combat forces shrink as a relative fraction of the total Air Force posture. Figure 2.5 shows how selected major force elements fared during the drawdown from Vietnam War peak budget levels to a mid-1970s nadir, and compares these same categories to present plans for force downsizing. Adjusting for the disparities in the starting point for each drawdown (that is, the larger force structure on hand in FY68 vs. that existing in FY89), we see that in proportional terms, current plans achieve a reduction in force structure largely at the expense of shooter force structure, in contrast with the post-Vietnam peak downsizing, in which the relatively greatest cuts were in nonshooter forces. Although revisions to this plan under the Clinton administration are possible, early indications make it clear that the Air Force's relative priority will be, by this measure, the continued protection of essential noncombat force elements, even if this direction means that additional combat units will have to be discarded.

Concluding Observations

The preceding material is intended to give a flavor of the relative place of so-called shooter and nonshooter capabilities within the Air Force over the years. Some points that seem to emerge from this simple overview are that

- Regardless of how one chooses to define *shooter*, these forces do not represent the major part of the Air Force program. Moreover, their place in the program has been declining in relative terms over time. This decline does

not, however, mean that the net set of capabilities represented in the force or, more usefully, the set of capabilities relative to the size of the U.S. combat posture and what it is being asked to do, has declined—quite the contrary.

- While some indicators do suggest that shooters enjoy a priority within Air Force planning relative to other kinds of capabilities and activities, when we look at the larger picture, we must qualify this finding very substantially away from an interpretation that automatically accords shooters the undisputed status as "top dog" in the budget and program. In this survey, we looked at just one of the many ways one might show the true picture (procurement vs. modification of aircraft) and saw that, when one looks at capabilities as opposed to airframes, the situation really is more complex than the prevailing wisdom might have us believe.
- While we did not look specifically at trends within either force and activity category, we did suggest anecdotally that, as a rule, the U.S. is not only attributing more relative importance in the budget to nonshooters, but is also asking nonshooter capabilities and enterprises to do more. Many examples come to mind that will endorse this notion—one can think about the history of Air Force space programs, for instance, or electronic warfare. And when some current and planned noncombat systems are considered, such as the C-17 and the Joint Surveillance and Target Attack Radar System (JSTARS), we see that this trend is perhaps accelerating in the quality direction in some nonshooter cases. As a result, the old-fashioned image of nonshooters as, within their bailiwick, low-end forces (either by design or as a consequence of their straightforward or other adoption from, say, civil aircraft models) may be less valid over time. As selected nonshooters grow in sophistication and performance, more and more of the nonshooter posture may become subject to the same budgetary tradeoff phenomena more likely to be associated with the more familiar, combat cases.

In short, then, nonshooters are important. They are costly in that they represent a substantial slice of the total Air Force effort measured in other ways (e.g., personnel assigned, flying hours), and a variety of historical trends suggest that their relative importance within the total Air Force program has been growing. Finally, these aspects of the noncombat force will have a particularly pronounced effect on plans for a future downsized Air Force.

3. Historical Review of Air Force Noncombat Operations

Overview

The noncombat operations that were the theme of the workshop are not new to the Air Force. They have been a frequent and important part of its activities over the last fifty years. Understanding these past activities provides an important base for understanding the future roles the Air Force may play in a changed international environment. This review of Air Force noncombat operations during the Cold War illustrates two key facts. First, the Air Force has performed a great many noncombat operations over the years, and second, these operations have been exceedingly diverse in both scale and function.[1]

Figure 3.1 shows over 500 Air Force operations conducted from 1947 to 1989. They are divided into combat and noncombat operations, the latter being defined as those that do not involve Air Force weapons-carrying aircraft. In practice, this definition usually means operations in which U.S. support aircraft (transports, AWACS aircraft, tankers, etc.) play the leading role. Note that the term *operations*, as used here, refers not to individual sorties, but rather to a set of Air Force activities that accomplishes some goal of interest to national-level policy-makers. Thus, one operation may contain any number of sorties needed to accomplish its task. Accordingly, Figure 3.1 shows the two major wars of the Cold War period, Korea and Vietnam, as broad shaded regions and does not imply any comparison of the scale or the importance of the individual operations enumerated. This figure was compiled from a partial listing of Air Force operations focusing on large, overseas activities.[2] It does not include domestic relief operations or operations that primarily employ classified surveillance and reconnaissance assets, and it includes only an incomplete listing of operations involving merely one or two aircraft, such as those routinely conducted under the Denton Space Available and Excess Property programs. While the Army and Navy also play key roles in many of the noncombat activities performed by the

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[1]The information in this section is drawn from Robert Lempert, Don Lewis, Barry Wolf, and Richard Bitzinger, *Air Force Noncombat Operations: Lessons from the Past, Thoughts for the Future*, RAND, N-3519-AF, 1992.

[2]Department of the Air Force, *The United States Air Force and U.S. National Security: A Historical Perspective*, White Paper, November 1990.

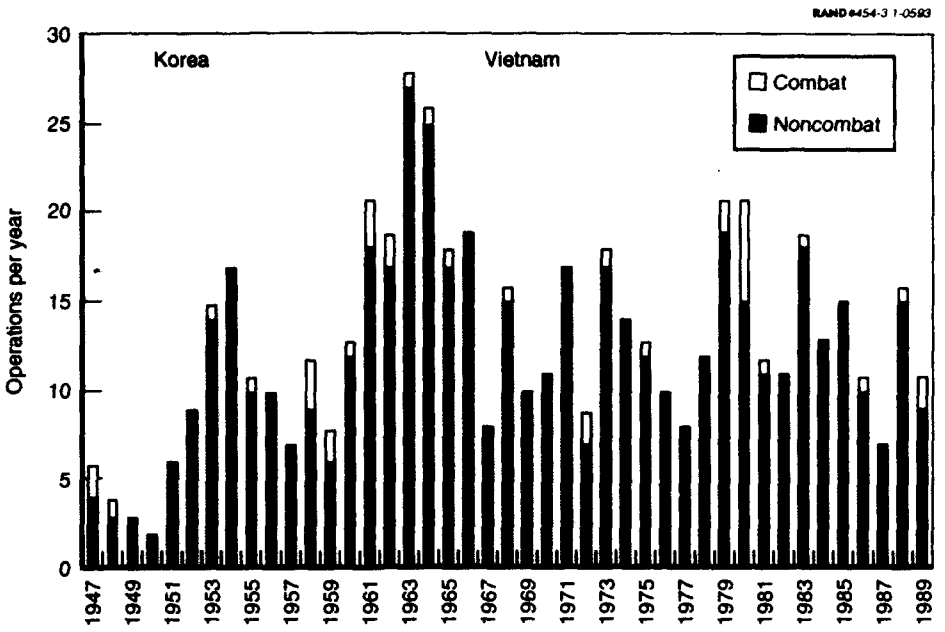

Figure 3.1—Selected Air Force Operations, 1947–1989

U.S.,[3] this list focuses only on those operations in which the Air Force played a leading role.

It is clear from Figure 3.1 that despite the list's exclusions, the Air Force has performed a huge number of noncombat operations. There has been much year-to-year variation, with a clear peak of activity during the Kennedy administration and early Johnson years, but overall the Air Force has averaged about one such operation per month since 1947. The figure also clearly indicates that such noncombat activities go on whether or not the Air Force is involved in major wars or smaller combat activities.

While the prevailing impression of Air Force noncombat operations is that they are mostly humanitarian relief, the activities are actually far more diverse. The year 1984 provides an illustrative "year in the life" of the Air Force that well demonstrates this point. In March of that year, the Air Force deployed AWACS aircraft to Egypt because of Egyptian fears of a Libyan attack on the Sudan. In June, AWACS aircraft were deployed to Saudi Arabia in response to a major Iraqi antishipping campaign in the Persian Gulf; and in the Antarctic, a C-141 air-dropped supplies to reprovision U.S. scientific bases. In August, the Air Force helped evacuate Johnston Island in the face of a typhoon, deployed an AWACS

[3]See, for instance, Clifton Headen and Ken C. B. Wilson, *Force Employment Study (FES)*, U.S. Army Concepts Analysis Agency, CAA-SR-91-4, February 1991.

aircraft to the Sudan to monitor fighting in Chad, and provided tankers and airlifters to support the U.S. Navy and other allied minesweeping operations in the Persian Gulf. In September, C-141s delivered passengers and nine tons of equipment to Zaire to support an Auto-Immune Deficiency Syndrome (AIDS) research project and provided relief to flood victims in Korea. In November, the Air Force delivered six motor vehicles and small arms ammunition to the U.S. embassy in Colombia in response to threats against U.S. personnel by drug lords. In December, the Air Force provided humanitarian relief to refugees in Ethiopia, carried relief to refugees in the Sudan, and brought back to the U.S. the survivors and bodies of victims from a hijacking attempt in Kuwait.[4]

Seven of these twelve operations fit the prevailing impression of Air Force noncombat operations: the transport of people and supplies for humanitarian relief. The other five, however, do not. In two of these operations—the minesweeping in the Persian Gulf and the delivery of supplies to Colombia—the Air Force supported the overseas operations of agencies of the U.S. government involved in potentially hostile environments. Three of these operations were "presence" missions in which the deployment of unarmed AWACS aircraft enabled the U.S. to demonstrate support for allies in the Middle East and to enhance their combat capabilities without the political complications of placing U.S. combat forces into the area.

Air Force noncombat operations are diverse in scale as well as function. Figure 3.2 plots the size of a selected number of airlifts that supported Air Force operations as a function of the total tonnage carried and the average tonnage carried daily. The largest ever Air Force airlift, in both total size and intensity, was the effort to supply the blockaded city of Berlin between June 1948 and September 1949.[5] The Berlin airlift carried an average of 5,000 tons per day for a total of 2.3 million tons. The airlift's busiest day, the April 16, 1949, "Easter Parade," delivered 13,000 tons, with nearly one aircraft per minute landing at Berlin's Tempelhof Field. The Berlin airlift was larger than the Desert Shield combat airlift that helped deploy the land and air forces that drove the Iraqi army from Kuwait in early 1991. The latter effort, however, covered a much larger distance—halfway around the world, as opposed to the few hundred miles between the former West Germany and Berlin.

The airlift supporting the Kurdish relief operation, Provide Comfort, was also large. The Air Force carried 500 tons per day for 75 days, for a total of 40,000

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[4]Department of the Air Force, November 1990.

[5]Roger D. Launius, "Berlin Airlift, 1948–1949," *Air Power History*, Spring 1989.

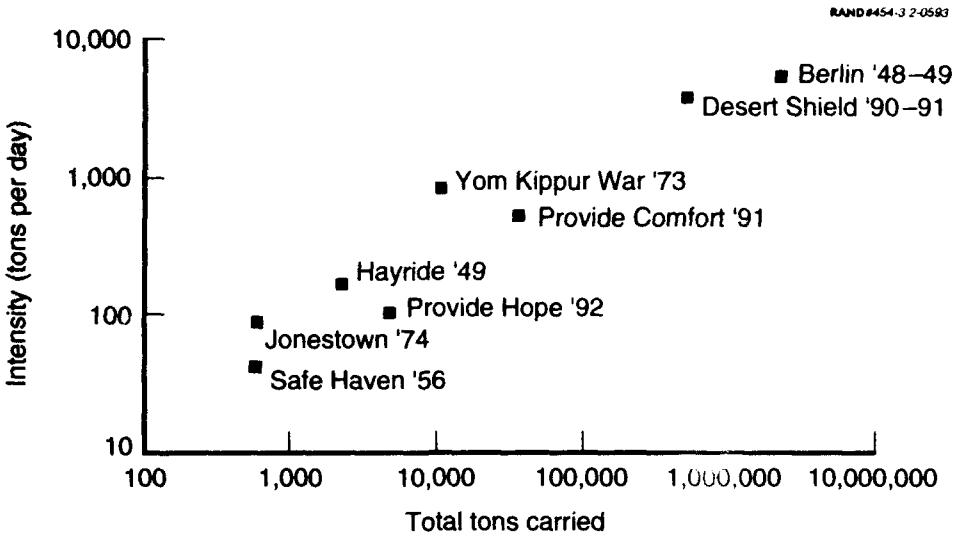

Figure 3.2—Range in Scale of Airlifts

tons.[6] It exceeded in total tonnage, but not intensity, the 1973 airlift that resupplied Israel during the Yom Kippur War.

The remaining operations shown in Figure 3.2 are about an order of magnitude smaller in both total tonnage and tonnage carried per day than Provide Comfort. They include Provide Hope, the relief operation to cyclone victims in Bangladesh; Hayride, which supplied food to livestock stranded by major snowstorms in the U.S. Midwest; the Jonestown Operation, which evacuated victims and bodies after the People's Temple mass suicides in Guyana; and Safe Haven, which carried Hungarian refugees from the Soviet invasion to safety in the U.S.[7] Most noncombat airlifts tend to be smaller still. Many involve only one or two transports flying a handful of round trips.

Three Examples to Highlight Kinds of Capabilities and Tasks

An important question highlighted by the historical review carried out in this project is the effect of the post–Cold War defense drawdown on the future ability of the Air Force to conduct noncombat operations. The Air Forces's airlift

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[6]Donald B. Rice, *Reshaping the Future*, testimony by the Secretary of the Air Force to the House Armed Services Committee, February 20, 1992.

[7]Data on Operation Provide Hope were provided by John Leland, Office of the MAC Historian, personal communication, April 13, 1992. The other three operations are described in detail in Lempert, Lewis, Wolf, and Bitzinger, 1992.

capabilities are designed to support its projection of combat capabilities and have been influenced in magnitude and form by U.S. commitments to operations in Europe and to regional operations the size of Desert Shield. In the future, the scale of the Air Force airlift capability may decrease as combat forces are reduced. However, it is entirely conceivable that the size and nature of the noncombat operations the Air Force is called upon to perform will increase. For instance, the United Nations might ask the U.S. to conduct several simultaneous airlifts the size of the Berlin airlift in order to supply large ethnic enclaves cut off by hostile neighbors in places such as the Balkans or Caucasus; or it might ask the U.S. to enable a mass migration of refugees on the scale of the one that occurred after the partition of India in 1947. If the U.S. decides it wants to participate in such operations in the future, it will face some difficult choices regarding the size of the airlift capability it maintains.

In addition to the size of the Air Force's capability, the diversity of its noncombat operations has to considered. Our historical analyses have considered fifteen specific case studies. Here, we summarize only three examples of Air Force humanitarian operations to illustrate the variety of tasks and capabilities that can be involved. Those three cases are the 1989 search for Congressman Mickey Leland, whose plane disappeared in Ethiopia; the 1986 air sampling operation following the meltdown of the Chernobyl nuclear reactor; and the relief operation to victims of the 1972 Nicaraguan earthquake. These three cases were chosen because of their diversity and because considerable information about them was available.[8] Our purpose in examining these cases in detail was to understand not only what services the Air Force may be called on to provide, but what some of the shortfalls or difficulties have been, since these point to possible future limitations.

These examples also provide a basis for comparing the unique capabilities of the Air Force for noncombat operations with the capabilities that may be available from the civilian infrastructure—those that may be obtained from relief agencies in most major countries and through the United Nations, from private firms such as Federal Express (which can deliver material worldwide), and from the global networks of commercial communications.

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[8]These three cases are drawn from Lempert, Lewis, Wolf, and Bitzinger, 1992. That document also examines twelve other cases: Hayride in 1949, Safe Haven in 1956, the airlift of United Nations troops to the Congo in 1960, the Yugoslavian earthquake relief operation in 1963, the relief operation after the 1969 Hurricane Camile, the relief operation after the 1972 Rapid City flood, the 1978 evacuation after the Jonestown massacre, the relief operation after the 1985 Mexico City earthquake, the evacuation of deposed Philippine President Marcos in 1986, relief operations after the 1986 Armenian earthquake, and relief operations after the 1989 San Francisco earthquake.

Case 1: The Search for Congressman Leland

In August of 1989, the plane carrying Congressman Mickey Leland on a visit to an Ethiopian refugee camp disappeared just short of its destination on the Sudanese border. The Ethiopian government, lacking the resources to conduct a full search and rescue operation, appealed for help. In addition to the humanitarian goals of the operation, there was great political pressure from Leland's concerned colleagues to mount a massive search rapidly.

The Air Force responded quickly and in force. Within twenty-four hours, it was flying search and rescue operations in Ethiopia. Given the meager Ethiopian infrastructure, the Air Force had to carry in flight, maintenance, medical, security, and pararescue teams and their equipment. After several days of searching, the wreckage of Leland's plane was found by Air Force helicopters.

Among the difficulties in this operation were those associated with the use of helicopters over long distances and the availability of adequate communications. Indeed, the importance and utility of helicopters for extending air operations outward from the main operating bases accessible to fixed-wing aircraft into areas with rugged terrain or primitive ground transportation proved to be a common lesson in many of our case studies. In the Leland search operation, one of the biggest difficulties the Air Force faced was adequate communications. The U.S. embassy's channels were insufficient; the Air Force had to jury-rig a satellite communications (SATCOM) link through an Air Force weather satellite.

Case 2: The Chernobyl Meltdown

The Chernobyl nuclear reactor suffered a catastrophic meltdown in April 1986. Since the Soviets were not forthcoming with accurate information, ascertaining the extent of the health hazards from radioactive clouds over Europe, North America, and Japan became a major concern of the Western powers. The Environmental Protection Agency (EPA) coordinated the U.S. government's response to the disaster. Because the U.S. Air Force routinely conducts air sampling missions, it was tasked to provide data to the civilian authorities.

Over eight days, the Air Force flew forty-four air sampling missions over Central Europe, the Far East, and the U.S. Pacific coast, operating out of bases in the United Kingdom, Guam, Japan, and the U.S. C-141 transports carried samples back to Air Force laboratories for processing. The Air Force data were a key source for public health officials.

The operation did, however, severely tax the capacity of the Air Force air sampling laboratories, and the Air Force also had difficulties obtaining landing rights at foreign bases for aircraft with potential radioactive contamination. Both of these issues, which came out of noncombat operations, have obvious implications for possible future combat situations involving chemical, biological, or nuclear operations.

Case 3: The Earthquake in Nicaragua

In December 1972, a major earthquake struck Nicaragua. The U.S. Air Force and U.S. Army played a key role in providing emergency relief to the victims. The main task of the Air Force was to carry U.S. Army supplies, equipment, and personnel into the disaster area. But because the civilian infrastructure was so heavily damaged, the Air Force and Army had to recreate a full array of services, from establishing a new air traffic control system at Managua's airport, to replacing ground transport with helicopters to ferry supplies from the airport to the surrounding areas, to providing their own communication equipment. In many of our case studies, the Air Force had to recreate civilian infrastructure that had been damaged by natural disasters.

Concluding Observations

In addition to the observation that the Air Force has conducted numerous and diverse noncombat operations in the past, our fifteen case studies suggest three specific lessons to guide our thinking about the nature of these missions in the future.

First, although there is a substantial amount of very capable civilian infrastructure in today's world, it may not be available or adequate in many emergencies. When the Air Force and its sister services become involved in noncombat operations, it is usually for a specific reason(s):

- Because they have specialized capabilities, such as worldwide air sampling.
- Because the civilian infrastructure is damaged or overwhelmed by a natural or man-made disaster.
- Because there is considerable danger in providing assistance, as in the current airlifts into Sarajevo.
- Because they can provide the only timely response capabilities.

Second, the frequency and scale of noncombat operations have not been limited by the size of the Air Force. Whether this situation continues will depend in large part on the size of the military force drawdowns and the scope of noncombat operations that the U.S. decides to undertake. There are conceivable noncombat operations that could stress current Air Force capabilities.

Third, the Air Force's principal difficulties in performing noncombat operations are shortcomings with infrastructure on the ground, such as communications, unloading aircraft at primitive fields, moving supplies from the airfield to where they are needed, landing aircraft with radioactive contamination, and managing inventories of supplies. Solving such problems can add much to Air Force noncombat capabilities and is often relatively easy and inexpensive, if these problems are anticipated ahead of time. It is often more difficult and time-consuming to solve them in a crisis or emergency situation.

Overall, the U.S. Air Force has enjoyed a well-deserved and legitimate reputation with the public and in the Congress for its effective and timely response to emergency and crisis situations. Whether it will be able to be as responsive in an era of declining budgets and changing international relations will depend on the extent to which it anticipates the relative burdens—both in demands and costs—of its combat and noncombat operations on the declining force structure. From our limited analyses of the historical cases, retaining or significantly improving the capabilities for noncombat operations may be much easier than doing so for the combat operations, given the fiscal constraints that appear to lie ahead.

4. Description of the Workshop

Objective

The goal of the workshop was to identify significant future mission requirements and desirable mission capabilities for U.S. Air Force support operations in light of the nation's changing needs for noncombat response options. To attain this objective, hypothetical future situations that could involve Air Force noncombat operations were discussed.

Design Concept

The conceptual design challenge of the workshop was to motivate and focus the participants in discussions of the envelope of Air Force support capabilities—i.e., their current limits and potential future expansion. Gaming was one possibility; seminar discussions were another. Gaming would have been a powerful tool for involving the participants deeply in the issues, but it would have required large investments of time for game development, testing, and play. At the other extreme, free-ranging seminar discussions would have exposed the scope and depth of the issues to the intellectual idiosyncrasies of the participants instead of drawing upon their expertise.

For these reasons, we chose a structured, interactive seminar process, something between gaming and the usual seminar. It was modeled on the Public Broadcasting System television series on Constitutional issues that was produced by Fred Friendly and conducted by Arthur Miller.[1] The format relies on a panel of experts who can be selectively interrogated by the discussion moderator. The moderator poses a hypothetical situation as the basis for his questions. Since the moderator is free to pose the situation, frame the questions, and designate which of the experts should respond, the seminar is well structured to pursue preplanned issues as well as those that may arise opportunistically.

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[1]Fred Friendly, "The Constitution: That Delicate Balance," a television series prepared from the Columbia University Seminars on Media and Society, produced for television by the Public Broadcasting System, April 1982, June 1983, and October 1983, and moderated by Professor Arthur Miller of Harvard University, School of Law.

The discussion between the moderator and experts is seminarlike; the hypothetical situations posed by the leader to the experts are gamelike. Although the format does not provide the same degree of motivational involvement usually found in gaming, it enables the exploration of chosen issues to the depth of the expertise available in the seminar panel. It also allows the redirection of dead-end discussion. This ability to pick the issues and probe them at will was what made the format seem most suitable for the purposes of the workshop.

Scenarios

The role of scenarios in these structured, interactive seminars is to provide the background or point of departure for the moderator's questions. The scenarios represent generic situations that the moderator is free to develop or embellish as necessary to explore the issues of interest. They thus can be brief outline descriptions of plausible situations—little more than one would find in a newspaper article—that rely upon the participants' ability to use their general knowledge to fill in likely details.

In this workshop, the desiderata for the scenarios were the following:

- They should provide clear and compelling reasons for U.S. interests or commitments so as to avoid debates over whether the nation should become involved in the situation.
- They should be situations in which the application of Air Force combat assets would be limited, circumscribed, or prohibited, so as to avoid a natural gravitation of attention to combat rather than noncombat operations.
- They should be situations that would call for a range of Air Force noncombat capabilities—not just airlift, not just in the air, and not just current capabilities—so as to increase the scope of issues that may be explored within each scenario.
- They should stress the current Air Force noncombat capabilities, at least qualitatively, and therefore point thinking toward new concepts, operations, conditions, and even new missions, so as to stretch the envelope of current capabilities.

Four generic situations were conceived to fit the above criteria:

1. An emergency response to a major disaster.
2. Support for a friend or client under siege.

3. Support for U.S. surface forces in a police action.
4. Support for friendly or United Nations forces in a peacekeeping action.

For each of these four generic situations, several specific examples were identified, and one of those examples was expanded into a scenario. The four scenarios were

1. A nuclear explosion in Tel Aviv, presumably set off by terrorists. Even as the massive relief effort begins, everyone worries that there may be another bomb hidden somewhere in Israel or in the city of some other nation.
2. Mexico falls into a spiral of urban rioting and looting disorders that escalate into widespread lawlessness and eventually overcome the government, with spillover effects upon the American Southwest.
3. A frustrated Japan offers to underwrite the bills for the U.S. Navy to clean out the Malay pirates, who have gone high-tech; but the Navy finds it needs some Air Force support.
4. The United Nations undertakes an enforced partition of the Caucasus between Armenians and Azerbaijanis to head off enclave problems such as those encountered in Yugoslavia, but it needs American logistics and command, control, communications, and intelligence (C3I) support to carry out the partition in the face of expected opposition.

The four scenarios are presented in their entirety in Sections 5 through 8, respectively.

Structure

The workshop participants fell into three categories:

1. Invited experts, mostly military planners, who were selected because they had pertinent experience in the issues we wanted to explore through the scenarios. Their expertise was related to their affiliations, experiences, responsibilities, and interest in the subjects. Appendix A presents a list of the invited experts and their organizational affiliations when the workshop was held.
2. The discussion leader, or moderator, who guided the discussions toward the issues to be explored. The leader acted in the capacity of inquisitor, or interrogator, of the experts.

3. RAND staff members who supported the workshop by recording the discussions and by providing for the administrative and logistical needs of the attendees.

The invited experts were divided into two panels of about a dozen each to ensure that each panelist would have an adequate opportunity to participate in the discussions. The two panels alternated in their roles as discussants and observers as they cycled through the four scenarios.

Procedures

The expert panels were asked to assume that they had been impaneled at the request of the Air Force leadership to consider the range of support options the Air Force could provide the national leadership if so requested. They were to provide advice and warnings on any roles, missions, operations, actions, or capabilities that might be requested of the Air Force. Their responsibilities were outside and additional to the normal chain of command for planning and executing operations: they were to play an oversight, advisory role for senior Air Force leadership, with no decision-making or operational responsibility.

The discussion moderator played the role of staff to the Air Force senior leadership, working with the expert panels to develop and convey their advice. The moderator was presumed to have somewhat greater knowledge about the situations than conveyed by the scenarios, but not a whole lot more. The panels were warned that the moderator was free to change the discussion context at will in order to pursue issues of interest to the Air Force leadership.[2]

The moderator invoked the following discussion rules:

- For the sake of time, the panelists were enjoined not to make speeches. They would be asked direct questions by the moderator, and they were to respond with answers or direct questions for the moderator or the other panelists.[3]
- The panelists were asked to play along with the roles that the moderator might thrust upon them. To get at an issue in which the panel had no evident expertise, the moderator might "invest" a panelist with expertise to force an answer. In such circumstances, the panelists were asked to "play

[2]This freedom included changing times and events in the scenarios and the assumed expertise of the panelists.

[3]To prevent circumvention of this rule, the panelists were also asked not to answer their own questions.

along" and give the best answer they could, with the assurance that if others on the panel thought they had a better answer, they could always speak up.

- The panel serving as the observers was asked to refrain from interjecting into the other panel's discussions so as not to encroach upon the opportunities of the other panelists to express their views. Of course, interjections thought to be vital to the validity or direction of the discussions were not to be withheld.

The procedural instructions from the moderator to the panelists included these four injunctions:

1. The moderator may take you forward or backward in time without warning—*hang on tight.*
2. You may be thrust momentarily into a role for which you do not think you qualify as an expert—*give it a try.*
3. The moderator may change the details of the situation in order to push you toward the edge of the envelope—*don't back away.*
4. You may be asked, "Whose question are you answering directly?"—*stick to the rules.*[4]

Under these procedures, the panels devoted ninety minutes to the discussion of each of the four scenarios—two scenarios on the first day, one for each of the two panels, and the same on the second day of the workshop. The workshop agenda is presented in Appendix B.

The written scenarios were typically passed out during the break before each was to be discussed. The moderator began each scenario discussion period with two summaries:

1. A reminder to the panelists that the scenario about to be discussed was only one of several that might be developed around a more general situation of concern, and that the scenario was intended as a means for getting at the issues posed by the general situation. The purpose of the reminder was to invite a broader consideration of the issues raised in the scenario.
2. An outline reminder of the main elements of the scenario. This was presented in the form of an update summary about "what we know" about the situation—the principal events that shaped the situation and the immediate problems it posed.

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[4]As the workshop unfolded, this rule was never needed or invoked.

The moderator then asked for any questions from the panelists to clarify the situation. The moderator was free to deny any additional knowledge or to offer information that seemed likely to drive the discussion toward the issues of interest. Typically, after a few such questions, the moderator could begin his interrogation of the panelists from a prepared list of questions.

All of the presentations and discussions of the workshop were audiotaped. Sections 5 through 8 present the scenarios and a synoptic version of the salient points of the discussions based on the audiotapes and the notes of the RAND staff members.

Extension

After the workshop discussed in this report was concluded, it was apparent that the method used to encourage discussion could be adapted to other situations and scenarios. Therefore, a topic of contemporary interest and importance—the possible uses of air power in the situation in then former Yugoslavia—was used as the basis for a seminar discussion at RAND. While not part of the original workshop, this seminar is described in Appendix C both because its findings are relevant to the objectives of the RAND project and because it demonstrated an application of the general technique.

5. Nuclear Detonation in Tel Aviv

Introduction

The first scenario that was addressed in the workshop dealt with the aftermath of a nuclear detonation in Tel Aviv, Israel. This scenario was developed to focus thinking on the unique requirements that arise from large-scale natural and man-made disasters, which may have a variety of consequences in terms of requirements for immediate medical attention or evacuation, temporary housing, cleanup, and reconstruction. Other examples of incidents that might be considered similar to this scenario include nuclear disasters such as Chernobyl, ecological disasters such as Bhopal, and such natural disasters as earthquakes, hurricanes, tornadoes, tsunamis, and floods.

Scenario

The efforts to bring peace to the Middle East have stalemated, as expected by most political observers and despite the exuberant hopes of the long-suffering bystanders. Each of the participants finds itself negotiating issues within its own body politic that are every bit as difficult as those causing contention with its regional adversaries.

In the early morning hours of a Sunday, the center of Tel Aviv is vaporized by a massive nuclear explosion. The devastation and damage are widespread. The dead are initially estimated at 50,000 to 100,000, with the injured running as much as twice more. A half million may be temporarily homeless. It is a disaster on a scale that has not been seen in half a century—since the fire storms created in the bombings of 1945. The radius of damage leads Israeli and other technical experts on the scene to estimate the yield of the nuclear device at between 30 and 50 kilotons.

Both Israeli and American intelligence have determined that the nuclear device was not delivered by ballistic missile or military aircraft. Commercial aircraft have all been accounted for, including seventeen destroyed on the ground at Tel Aviv. Delivery by private aircraft cannot yet be ruled out because the Tel Aviv air traffic control (ATC) radar tapes have been lost in the destruction. Surface delivery of the device to Tel Aviv is widely suspected.

Early atmospheric sampling flights launched from Turkey indicate that the device was of remarkably sophisticated design and manufacture: a boosted plutonium bomb with fission and fusion products similar to those from detected Chinese and French atmospheric tests. As expected, all of the acknowledged nuclear-armed states volunteer that their nuclear weapons remain under control and are all accounted for.

Six radical Arab groups claim responsibility for the blast within twenty-four hours: two in Lebanon; one each in Syria, Jordan, and Libya; and a new and unlocated faction claiming Palestinian associations. All but the one in Libya claim that more such bombs are available and will be used unless its demands are met. The demands all focus on ending Israeli occupation or control, but at predictably different places: Southern Lebanon, the Golan Heights, the West Bank, the Gaza Strip, and Jerusalem.

Israeli intelligence thinks the weapon was smuggled into Israel by Palestinians who are probably little more than willing agents of a well-financed worldwide Islamic vengeance conspiracy with roots running in many directions—to Algeria, Iran, Libya, Iraq, and Syria. The Palestinians, Lebanese, and Jordanians are judged to be merely the frontline proxies for this conspiracy, which presumably has good connections to the weapon and technology suppliers, such as China, France, Russia, and Germany.

The Israelis have two urgent problems: coming to the aid of the survivors of the destruction of Tel Aviv and preventing a repetition of the catastrophe somewhere else in Israel. The possibility of more bombs, already inside Israeli territory or security zones, is taken seriously. Retaliation, although attractive, has no reasonable point of focus until the source of this monstrous terrorism is narrowed. The sophisticated nature of the bomb suggests that the trail could ultimately lead to a nuclear-armed nation as either a deliberate or an unwitting contributor to the disaster.

The Israeli government turns to the U.S. for assistance with both problems.

Discussion

Initial discussion focused on the wind and weather patterns in the region to identify the likely path of the radioactive products, on the ambient levels of radioactivity in the atmosphere along the path from ground zero, and on fallout conditions. The participants then turned to the problems of identifying the source of the weapon, identifying any other possible weapons, and assisting in controlling traffic across Israeli land, air, and sea borders. Although aware of the

claims by the nuclear powers that all weapons were under centralized military authority, most participants felt that a diplomatic request for spot inspections of arsenals might help to determine the origin of the weapon, as would tracing the whereabouts of known nuclear scientists. Following discussion of these issues, the participants turned to consideration of the Air Force's contribution (as well as that of the other services) and to concepts of operation.

Concepts of Operation

The discussants seemed to view the twofold Israeli request as providing a sufficient basis for establishing the U.S.'s objectives in the operation: providing assistance to the survivors and assisting in the detection and neutralization of any additional nuclear threats.

The participants felt that some airlift would be possible within Israel. While Dov Airport was assumed to have been destroyed, Ben Gurion Airport was assumed to be still usable. Nevertheless, due to the contamination and destruction of Israeli infrastructure and the constrained airspace, the participants seemed to agree that wherever possible, operations should be staged out of bases outside of Israel, perhaps in Egypt or Cyprus. Participants felt that humanitarian airlift and emergency evacuation flights would necessarily have to operate out of Israel itself, while support missions (e.g., U-2Cs, JSTARSs, AWACSs, RC-135s, KC-135s) could fly out of other, non-Israeli bases.

The Commander in Chief, Transportation Command (CINCTRANS) was expected to be in charge of the operation as component commander, and contributions from the other U.S. military services were also anticipated:

- *Navy.* In addition to Air Force airlift capabilities, naval amphibious assets would likely be useful for large-scale evacuations, and hospital ships might be necessary. A naval airspace link was also seen to be necessary.
- *Army.* The U.S. Army's decontamination assets were seen as capable of being brought into the theater, as were its assets for psychological operations, civil affairs, and military police capabilities—all of which would be useful in augmenting Israeli capabilities to manage the chaotic aftermath of the detonation.

Required Operational Capabilities

The operation was expected to require the use of Air Force intelligence assets to assist in the search for additional weapons, as well as a variety of assets to contribute to the varied humanitarian, medical, and construction aspects of the operation.

Short Term

A number of operational capabilities were identified by the workshop participants as being potentially useful in the short term. In line with the charter to the participants, these were presumed to be the basis for the subsequent (hypothetical) briefing to the Air Force leadership.

Airlift. The most important Air Force mission was seen to be a noncombatant emergency evacuation operation (NEEO) of unprecedented scale that would require a huge airlift. In addition to the vast number of Israelis and Arabs that would likely be affected by the detonation, there are believed to be 5,000 to 10,000 American citizens in Israel who would need to be decontaminated and evacuated.[1] Contaminated aircraft would be used to ferry evacuees to decontamination facilities outside of Israel, where they could begin receiving medical care. With the societal breakdown that would follow the detonation, there would also be a large requirement for food, water, blankets, medical supplies, and other necessities. There was some discussion of this aspect of the operation and how it might be run simultaneously with the emergency evacuation operations, but it was generally felt that the Air Force's past experience with airlift and evacuation operations ruled out the need for detailed discussion even though the scope of this catastrophe could tax the available capabilities.

Medical Assistance. Due to the level of contamination, the first order of business would be triage to identify the priorities for evacuation. Since radiation sickness would occur in a very short time, it would be important for triage and evacuation to begin immediately. In regard to the triage process, there was some difference of opinion as to the priority for evacuation, with some participants believing that it might be desirable to first evacuate the healthy, and then the sick, rather than the other way around. Further, it was not clear that the right sorts of facilities exist to take care of the sick; in Egypt, for example, there may be a shortage of

[1]It may safely be assumed that other (e.g., several European) nations would also have nationals in Israel that they would be concerned about evacuating.

qualified personnel. The participants noted, however, that medical ships could be placed in the Mediterranean, that public buildings such as schools, synagogues, and mosques could be used as temporary hospitals, and that medical attention could be provided to evacuees outside of Israel. Identification of bodies and grave registration might be necessary, but could be performed by the Israeli militia, since Hebrew (and Arabic) language skills would be necessary. Mass burials might be performed, however, perhaps reducing this requirement somewhat.

Construction. Up to 100,000 survivors awaiting evacuation would immediately need tents or other temporary shelter that would have to be airlifted in and quickly built. A number of alternative options were discussed, including construction of shelters by United Nations personnel, members of the U.S. Army Corps of Engineers, or Air Force "Red Horse" teams, and the use of commercially available transportable temporary housing.

The discussants noted that "tent cities" would probably be set up before airlift became involved, and they expected that there would be a major need for light temporary housing that could be carried via airlift, quickly erected, and constructed using only low manpower. For example, there are commercially available sponge/foam mixtures that take five minutes to set up and "fix" and that are very durable. The auto industry is also currently making use of light, durable materials in automobile constuction.

Finally, airfield repair was also seen to be a likely required construction activity.

Command, Control, Communications, and Intelligence. A variety of Air Force intelligence capabilities were deemed useful in attempting to identify the source of the detonated weapon and in searching for any unexploded devices. Specifically, Air Force "sniffer" aircraft, which sample and analyze airborne fission and fusion products, would be a required capability, as would reconnaissance aircraft, such as TR-1s. While the Israelis themselves were expected to handle the bulk of the burden, the Air Force might be called upon to assist in closing the Israeli land border to help prevent the introduction into Israel of another nuclear device. The AWACS would be useful in monitoring air traffic and the JSTARS could be useful in keeping track of ground traffic. The maritime version of the AWACS can scan seaborne traffic rather well. Some discussants proposed consideration of ways to seal off Israel by air, land, and sea if the Israeli government asked for such assistance.

Discussants saw a related requirement for nuclear search teams. There is a civil capability for searching for nuclear weapons in the Las Vegas-based Nuclear Emergency Search Team (NEST), and there are currently similar organic

capabilities within the Air Force, although the particulars about these capabilities are classified. Since the "fingerprint" from the weapon is useful only in identifying the origin, not any intermediate possessors, Air Force signal/electronic intelligence (SIGINT/ELINT) and intelligence fusion capabilities would be necessary to assist in identifying those responsible for detonating the weapon. Similarly, some of the storage requirements (e.g., size, power for cooling) might provide a tip-off for search teams, suggesting the requirement for a strong intelligence analysis capability to assist in directing the search.

The participants also viewed as important the setting up of a C3I infrastructure to run the operation that would allow interservice and multinational coordination by stressing interoperability. The management of all of the international air resources caused some concern, arguing for consolidating air control in a single air traffic manager. Nevertheless, the participants recognized some problems in setting up an Air Force air control structure because of likely Israeli sensitivities regarding the sovereignty of their airspace. Any such arrangement would likely have to be done delicately and in support of Israeli controllers and air defense operations.

Civil Affairs/Public Affairs/Psychological Operations. A critical capability, operated by the Israelis and the U.S., would be civil affairs/public affairs/psychological operations to help introduce order into the chaotic aftermath of the detonation. These activities, which would likely involve broadcast and print media, would primarily be aimed at assisting victims in finding shelter, medical attention, and family members, and in performing basic life-sustaining activities in the face of widespread privation. Psychological operations capabilities might also be necessary to help manage the panic and disorganization likely to accompany evacuation operations.

Longer Term

The discussants considered a number of "preplanning" activities that might smooth the management of this operation. These items were in line with the workshop objective of identifying useful future capabilities for noncombat support operations.

First, some participants believed that it would be worthwhile for the Air Force to perform mission area analyses (MAA) for humanitarian operations, peacekeeping, etc., including life-cycle costing of equipment, manpower, and personnel. They believed that this approach could improve the effectiveness and efficiency of these operations. They thought that coordination with Air Force

analyses for the combat and combat support missions would be of value not only for the integration of both types of missions, but also to prepare for possible future situations. The participants also considered that it might be appropriate for the U.S. Transportation Command to take the lead in planning for these sorts of operations, since the assets and planning would then be the responsibility of a designated organization rather than continuing to be treated in a somewhat ad hoc manner.

Second, it might be possible to develop a plan for a massive airlift (not necessarily related to a nuclear-specific incident) in which international cooperation allowed the coordinated use of various national assets. This was seen to be a low-cost approach with a "good sales pitch." In this regard, it was suggested that the U.S. might serve as coordinator of national military airlift capabilities with the carriers of some other nations (Lufthansa, Aeroflot, Scandinavian Airlines System, etc.).

Finally, the participants spent a good deal of time discussing the requirement for an easily transportable shelter. Some discussants felt that the exacting demands of military specifications might not, in fact, apply for humanitarian operations, and that businesses could be encouraged to develop shelter capabilities for purchase by the military that would be useful in a range of situations, including floods, earthquakes, and the scenario under discussion. All participants appeared to agree that the Air Force should be the entity to look at the products that are available and acceptable, since it would be responsible for moving whatever was to be used.

Constraints

Among the operational constraints identified by the participants were the following:

- The ambient level of radioactivity would limit the ability of nuclear sensors and NEST-like assets to operate by masking the signature of additional weapons. Given all of the contamination present, the discussants felt that it would be difficult to identify any additional devices in the region, likening the situation to a "shell game."
- If an unexploded weapon were found, the use of air power to destroy it was not seen to be a viable option, and there appeared to be some concern that the use of special operations forces could not guarantee that the possessors would have insufficient time to detonate the weapon. Other means, such as cordoning off the weapon or the use of gas to neutralize other terrorists in

possession of an additional nuclear device, might require other capabilities or raise other issues (e.g., the Geneva Convention).

- The unavailability of ample portable decontamination capabilities appeared to limit the ability to process the large numbers of likely victims. This was not just a matter of expense in the view of some of the discussants, but one of efficiency; it might save time to airlift in decontamination trucks, for example.
- Staging and management of contaminated evacuees were seen as likely problems. For example, decontamination of aircraft entering contaminated airspace would be a problem on several levels. First of all, it might be difficult to get overflight or landing rights for flights transiting other countries, and decontamination activities might be necessary at airports used by contaminated aircraft. Second, while CINCTRANS would want all necessary aircraft to be used, the Chief of Staff would likely be concerned about decontamination of dirty planes and unhappy about the possibility of some aircraft being made unsafe by their use in these operations.
- Political sovereignty issues could compromise the necessarily integrated management of air control (including air defense and overflight rights).
- There may be command-and-control or language problems in working with the Israeli and Arab victims.
- Insurance would likely be a problem for the Civil Reserve Air Fleet (CRAF) because of exposure to contaminants (either via carrying contaminated passengers or via flying through contaminated airspace), which might render the CRAF unavailable to support evacuation operations.

Highlighted Issues

Overall, this scenario and the related discussion highlighted some of the problems of dealing with a major catastrophe that could tax Air Force airlift capabilities, that would present unique problems in the area of nuclear catastrophes, and that would necessitate cooperative noncombat support operations in the international arena.

6. Mexico in Chaos

Introduction

This scenario was developed to explore the implications of large-scale civil unrest and the types of Air Force assets that might be brought to bear in such a situation. The scenario raises considerations of the types of U.S. forces that might be brought in and the roles they might play to support the Mexican government in restoring order in the short term and in restoring the legitimacy of the government in the longer term. This longer-term objective had strong implications for the nature of the activities that were deemed suitable—and unsuitable—for U.S. forces.

Scenario

Despite the earnest reform efforts of the Mexican government, the distribution of wealth in Mexico has become even more distorted. Privatization of industries and utilities improves the nation's productivity but not its distribution of wealth, because the ownership base narrows rather than widens. The Mexican middle class, historically rooted in the government bureaucracies and nationalized industries, now shrinks as ownership migrates toward the wealthy class. Much of the middle class either sells out to the wealthy or aggressively expands its ownership to become wealthy.

The historically poor campesinos are now augmented by an even larger group of urban poor. Unlike their country cousins, the urban poor are constantly confronted with the disparities between their lives and those of the elites. Although Mexico's economic growth is barely keeping pace with its population growth, the modest gains are funneled into the hands of the relatively small ownership class, with most of the public, particularly the urban poor, losing ground.

Several isolated urban riots are triggered by the evictions of squatters from urban land slated for development. The instigating factors are not new, but two of the riots overwhelm the police and lead to wide-scale looting. After that, rioting for the implicit purpose of looting becomes increasingly attractive to the young urban poor as a means for temporarily raising their material prospects. Relative safety for the looters is assured by the large scope of the disorders, which, while

not organized, nevertheless spread rapidly from almost any incident or pretext and quickly overwhelm the police.

One use of the military to suppress a looting spree in Mexico City turns into a disaster for both sides: many rioters are killed, and large portions of the military thereafter abstain, openly refuse riot duty, and even join in the looting. The negative reaction of the Mexican public and military, amplified by the world press, forces the government and ownership elites to moderate their efforts to use force to quell the disorders and stanch their losses.

As the rioting slowly, episodically spreads, Mexico falls into civil chaos. There is little evidence of organized opposition to the government; the mobs and gangs run wild. Many elements of the government, including the police and military, fade from view, authority, or any accountability for what has preceded the collapse. Looting becomes more violent; rioting and robbery turn into rape, murder, and mayhem. Public services decay, but stocks of looted goods in the urban poor communities actually increase and tend to offset the loss of services. The campesinos are relatively unaffected, but they watch and listen to the urban developments with growing concern.

Many Mexicans, from all strata and locales, try to flee the country to escape the spreading chaos, most of them bound for the U.S. When the formal and informal support structures for the immigrants quickly become swamped, the Hispanic population in the American Southwest is joined by liberals and conservatives (for different reasons) in a call for U.S. intervention.

Although there is a legally constituted Mexican government available to authorize outside "assistance" from the Organization of American States (OAS) and neighboring nations, the power of that government to control internal events is rapidly shrinking. If outside assistance is to be provided under the color of the Mexican government, it will have to be both quick and comprehensive. The American government begins to organize its resources for assistance or intervention.

Discussion

The consensus of the workshop discussants was that the U.S. government should not get involved in the sort of direct operations envisioned in the scenario in support of the Mexican government. If national leaders did decide to provide such support, however, they should keep long-term goals in sight and should use the U.S. military to back up and support the Mexican government so as to contribute to its legitimacy. Short-term actions that might help in restoring order

but would be detrimental to U.S. relations with Mexico in the long run should be avoided.

Workshop participants were very wary of this situation and saw the commitment of U.S. military forces as generally undesirable, for two main reasons. First, a variety of underlying socioeconomic factors were seen by the discussants as leading to the urban disorder posited in the scenario, factors that were unlikely to be materially affected by the use of Air Force assets. Second, commitment of U.S. forces was seen as possibly being perceived as propping up an incompetent political establishment and thereby undercutting the legitimacy of the Mexican government. Although during early discussion of the operation the participants seemed to view it as an opportunity to work side-by-side with Mexican civil and military authorities, concern about undercutting the legitimacy of the Mexican government led them to the position that U.S. military contributions should generally remain in the background.

Early discussion of U.S. national objectives—social stability and a remedy for the root causes of the disorder—led workshop participants to look in turn at short- and longer-term contributions that the Air Force might make. Of particular interest was the evolution of the discussion with respect to the visibility of U.S. military forces. At the beginning, participants could see no reason for not working side-by-side with the existing Mexican government, but as the discussion proceeded, it became more apparent that high-visibility operations could very well compromise the short- and long-term legitimacy of Mexican leaders by appearing to aim at "propping up" the government. As the consequences of direct intervention became clearer, longer-term measures became more prominent in the minds of the participants, with attention focusing on the contributions that air power might make to a developmental program.

Concepts of Operation

The major objective of such a mission was to support the efforts of Mexican civil and military authorities to defuse the unrest and foster security and stability in Mexico City and the outlying areas. Three general types of direct support were suggested:

- *Security:* Providing "low visibility" support to Mexican authorities' efforts to defend government buildings and infrastructure against destruction and to calm the restive population. Many participants, however, sought to avoid *any* direct U.S. involvement.

- *Short-term humanitarian assistance:* Assisting Mexican authorities in providing medical assistance, pallets of food, and deliveries of other goods and services.
- *Longer-term programs:* Military-to-military contacts aimed at supporting Mexican military officers in situations involving human rights issues, in civil-military relations, and in increasing their competency in the use of air power to support development efforts and provide medical and other assistance.

Some participants stressed that Mexico City is largely an unarmed city and would in any case not require a great deal of force to combat the 10 percent of the population posited to be in the streets. They also indicated that the civil nature of the mission would require "de-tuning tuned-up capabilities," i.e., ensuring that assigned U.S. military personnel would not treat the situation as a combat mission, but one requiring restraint, with an emphasis on communication, persuasion, and a security-inducing presence. Further, they seemed to agree that developments on the ground were the key and that air power should be used generally in support of ground forces.[1] Use of Air Force assets was generally seen to be nonlethal in nature, giving rise to what was called "benevolent air power."

Those participants who had grave questions about whether U.S. military involvement in this situation was in the U.S. interest were unclear as to who specifically in the Mexican government was to be helped (e.g., the military? the bureaucracy?), especially if civil authority over the military broke down. They consequently viewed the proper role of U.S. military forces as closing and maintaining surveillance of the U.S.-Mexican border to contain the flow of refugees, but not direct involvement in supporting the Mexican government.

There was no discussion of the nature of the joint command that would be established for this scenario. Similarly, apart from some brief discussion of potential U.S. Army contributions, the main contributions of the other U.S. military services were not considered in great detail.

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[1]In the 1992 Los Angeles riots, the presence of Marines from Camp Pendleton, light infantry from Fort Ord, and National Guard units was seen by many to have had a calming effect. Initially, workshop participants estimated that perhaps as much as 90 percent of the contribution that the U.S. might make would be in the way of ground forces (e.g., infantry, military police). As the discussion unfolded, however, it became clear that to the extent that U.S. national leaders sought a low-visibility U.S. presence, Air Force contributions to the operation would become more attractive than Army forces on the ground, and that ground forces should be Mexican.

Required Operational Capabilities

Short Term

The general U.S. military capabilities identified as potentially having some value in the short term included the following.

Psychological Operations and Civil Affairs. Psychological operations involve the management of information to affect the behavior of a target population. The Air Force's psychological operations capabilities largely reside in the Reserves. Among the tools that might be brought to bear are radio and television broadcasting, air-dropped leaflets, and videotapes that might be distributed to the population. The participants also noted that the presence of U.S. soldiers during the Panamanian operation quite likely reduced the human rights abuses; making use of military-to-military contacts for assistance in civil affairs matters was seen not only as an effective way of preventing human rights abuses, but also as a means of improving the Mexican military's ability to communicate with the population.[2]

Command, Control, Communications, and Intelligence. In addition to standard communication capabilities that would enable U.S. forces to work effectively with Mexican forces, some added capabilities were discussed. Information was viewed as an important weapon in the operation, especially in shaping the behavior of the population, and some discussants suggested the desirability of an aerial television broadcast capability that could be used to transmit news and governmental statements to the Mexican population or statements from regional (e.g., OAS) leaders.

During the 1992 Los Angeles riots, several discussants observed, television station helicopters saw more than the police did. The broadcast media were thus also seen as an important source of data on where rioting, looting, and other activities were taking place, although there seemed to be some question on the part of some of the discussants as to the extent to which authorities were able to exploit this information in real time. What was seen as potentially most useful was direct tactical information that could be exploited and might assist in counter-concentration activities, especially in cases in which video-equipped helicopters could serve as "eyes at night." Air power might be used to illuminate and observe nighttime rioting or looting, possibly serving to disperse looters and deter others. There was also discussion of "direct data links" that would

[2]It might also serve to increase military loyalty to the government.

facilitate targeting of counter-concentration forces.[3] A side-looking capability was also briefly discussed. Although not discussed in any detail, relevant Air Force intelligence assets could include SIGINT/ELINT collection and analysis capabilities to monitor the loyalty of Mexican units or to identify subversive or illegal groups attempting to exploit the chaos with assassination, terrorism, bank robbery, or other actions.

Jamming. Many of the participants seemed to think that to the extent that Mexican commercial radio and television broadcasting capabilities were in the hands of rebels or otherwise contributing to the unrest, it would be desirable to jam those broadcasts and possibly engage in broadcasts on behalf of the authorities.[4]

Airlift. Air Force airlift capabilities, and possibly transport helicopters, would be important in assisting the Mexican government in providing humanitarian assistance such as food and medicine, as well as in helping to ameliorate the effects of a breakdown in society and the unavailability of critical services (electric power, water, bus service, etc.). Air power was also seen as potentially crucial to providing access to areas of Mexico that are remote from the capital. In this regard, provision of medical, dental, or construction services to demonstrate government concern with quality-of-life issues was seen as a potentially useful tool in contributing to the legitimacy of the Mexican government.

Longer Term

The training of foreign militaries to perform various noncombat, development, and humanitarian operations was seen as offering a long-term method of increasing the sensitivity of these militaries to peaceful uses, including national development. Some also viewed such scenarios as providing opportunities for Reserve officers to identify important aspects of such situations and thus serving as civil affairs training opportunities.

Air power, as we know it, is not currently a big player in quelling civil disorders, and the U.S. government has limited experience and expertise in civil disorders apart from psychological operations. It struck many of the participants that the traditional manner in which some missions are performed (e.g., observation)

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[3]Although this topic was not discussed in any detail, an example might be an ability to automatically identify the position of a helicopter broadcasting live video. This might enable a command center to quickly compare the seriousness of various areas of the city and more efficiently allocate police and military forces to the most worrisome neighborhoods.

[4]Broadcasting on behalf of the Mexican authorities could, however, undercut the legitimacy of the government by appearing to prop up the regime.

would require adaptation (e.g., to allow navigation in urban landscapes, to make use of live-action video broadcasts) to be suitable to an urban environment and a combined-arms approach that included civilian police forces. This would necessitate specialized doctrine, training, and exercises to make combat and combat support forces more suitable for civil actions.[5]

Constraints

Most discussants appeared concerned about appearing to prop up the Mexican government, thereby reducing its legitimacy in the eyes of its citizenry. As a consequence, after some initial consideration, the participants came to generally eschew the use of air power for shows of force to deter or suppress disturbances.[6] As the discussion progressed, air power was increasingly viewed as best used in a support role to Mexican forces. To the extent that "benevolent" U.S. air power was being used, these concerns were somewhat allayed; but not entirely, since even this form of air power could be seen as an erosion of the Mexican government's ability to manage its own affairs and meet the needs of its population. In any case, Air Force capabilities that were less benevolent were clearly seen by many discussants as best not flaunted.[7]

High-visibility U.S. operations were thus seen as offering the potential to undercut the perceived legitimacy of the Mexican government. This view seemed to hold for virtually all of the sorts of capabilities that the Air Force might bring to bear to support the operation. Further, many participants seemed to see political benefits in tying the operation to the OAS, which would further reduce the perception of the operation as U.S. intervention into Mexican domestic affairs.

There were also questions as to the proper (i.e., most efficient) mix of "blue-suited" (Air Force) and "green-suited" (Army) air power. For example, Air Force AC-130s and Army attack helicopters could be viewed generally as reasonable

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[5]British use of ground troops in support of police in Northern Ireland was cited as being potentially relevant. British troops returning from forward deployments are "detuned" and sensitized to the more benign civilian setting of their service in Northern Ireland. Training that might be appropriate to civil disorders would include landing on building tops and combined-arms operations to cordon off or clear buildings.

[6]For example, during a disturbance in the Philippines in the late 1980s, Air Force fighters from Clark Air Force Base flew over Manila to underscore U.S. support for the Aquino regime. Many participants opposed a show of force in this scenario, viewing it as counterproductive. They felt that low-visibility air operations were more desirable. A variety of actions might fall into this category: tear gas dispersal and other nonlethal technologies; dye-marking of rioters for later identification by civil and military authorities; isolation of active from nonactive communities or neighborhoods.

[7]For example, some argued that combat and intelligence aircraft should not have U.S. markings and should fly no lower than 5,000 feet to avoid visual recognition as U.S. aircraft.

substitutes for one another, although the AC-130's loiter capability and deniability might be better than the Army helicopter's capability.[8] Similarly, Army medevac, personnel transport, and cargo/utility helicopters appeared to be useful in a variety of roles in more remote areas.

Highlighted Issues

Overall, the scenario and related discussions emphasized the interrelationships between military and political considerations in such international events, the limitations of both combat and noncombat support operations when the goals of such operations are not clear, and the importance of a better understanding of the desirable capabilities for the "benevolent employment of air power."

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[8]Air Force AC-130 gunships were seen as a potentially useful reserve capability in backing up the Mexican authorities, but workshop discussants thought it important to keep their operation unapparent to the general population. This might be done by repainting or reconfiguring the airplanes to make them appear less menacing, or by basing them at a remote airfield and keeping them in a somewhat distant orbit (two to seven miles) from areas of concern.

7. Malay Pirates

Introduction

This scenario was developed to motivate consideration of the roles the Air Force might play in support of the other U.S. military services—in this case the Navy—and in support of law enforcement operations. Other relevant situations include the 1987 Persian Gulf reflagging and escort operations, and antidrug operations in the Caribbean and Pacific.

Scenario

Piracy in the waters surrounding the Malayan peninsula has a long and colorful history. In this century, however, aside from the Mayaguez incident and attacks on the Vietnamese boat people, piracy was little more than a nuisance to fishermen and small boat traffic until recently, when several regional developments elevated the problem to much more than a tolerable level of regional lawlessness.

First, the Malay pirates have been slowly brought under the control of a single family, known as the Say-Says, with strong connections to the drug trade of Southeast Asia. Through the drug trade, the Say-Says have "family" members throughout the region—in Thailand, Malaysia, the Philippines, Vietnam, and Indonesia—even in government and commercial enterprises. In little more than a decade, the Say-Says have turned a loose brotherhood of waterborne thieves into an international racket rivaling the Mafia and the Medellin cartel. Their illegal operations include smuggling, piracy, and "protection" extortion from fishermen, oil-drilling platforms, and small coastal villages. Their legal operations are substantial and provide ample covers and connections to prevent effective counteraction from any regional government.

Second, the Say-Says have brought high technology to piracy. Although their ships and boats are indistinguishable from the run-down regional water traffic, they are equipped with the most modern communication and navigational devices. With this equipment, they are able to closely monitor the water traffic over an area of about one million square nautical miles and to coordinate the complexities of intercepting a specific ship that may have been identified a

month earlier from computerized shipping schedules developed on the other side of the world.

Third, most of the regional governments are declining rather than growing in their military and police powers because of the economic depredations of rapidly increasing populations and corruption. These governments would rather make deals with the Say-Says than take them on. Indeed, in some regional governments, the Say-Says' interests are well represented. The U.S. Navy presence in the region has also declined, because of the defense retrenchments of the 1990s.

Much of the world outside the region has ignored the rise of the Malay pirates, accepting them as a sorry part of the regional culture. Australia is the most prickly regional power about the piracy, with much comment in the Canberra press; but the Say-Says have been very careful to leave Australian traffic untouched. Some Japanese traffic has been molested, but the Japanese are loathe to extend their military or maritime police protection so far south into a region that still exhibits extreme sensitivity to the Japanese occupations of the early 1940s.

Two incidents suddenly escalate the problem the Malay pirates pose for the U.S. government. An American yacht cruising in the South China Sea is molested by pirates, resulting in the death of the owner and the rape of his wife. This incident is press worthy because the murdered man was a very popular ex-Secretary of State and one-time presidential candidate, and the woman is a well-known celebrity in her own right, as a former actress and a member of the New York social circles. Her reports of the incident saturate the American press.

The second incident involves a Japanese tanker in ballast returning to the Persian Gulf. The ship is intercepted off Borneo and boarded while under way. The crew is robbed and the ship looted. The pirates, probably tipped off through informants, force the purser's vault and remove a large quantity of gold entrusted for shipment to Kuwait. The damaged tanker puts in at Singapore for emergency repairs. The Japanese are furious and frustrated: they are victims of a crime that leaves them helpless because they are also the victims of their own World War II behavior in the region.

The Japanese quietly present their dilemma to the U.S. government, suggesting that they would be willing to help underwrite the costs of American military operations to clean out the Malay pirates. The current American administration, facing upcoming elections and goaded by press reminders of Jefferson's bold actions against the Barbary pirates, accepts a proposal put forward by the Joint

Chiefs of Staff (JCS) chairman (an admiral) "to insure the freedom of the seas and the security of the international sea lanes."

The Navy finds that, unlike the Barbary pirates, who were harbored by several satraps, the Malay pirates are woven into the fabric of the region—on hundreds of ships and boats, in dozens of coastal villages in at least six countries, and well connected to the very governments and commerce the Navy seeks to protect. It has become painfully evident that cleaning out the Malay pirates will require more than convoying, carrier battle groups, or frigates on patrol. The campaign promises to be sustained, wide scale, multifaceted, and frustrating. The U.S. government is assessing a broader range of options.

Discussion

In general, the discussants viewed this scenario as poorly suited to the commitment of U.S. military forces. This was due to the perception that piracy in the region was a culturally based, systemic, and long-term problem, and that the involvement of U.S. military forces would be unlikely to affect the underlying conditions. When the participants were pressed to identify the sorts of Air Force assets that might be brought to bear, however, the Air Force contributions appeared to be significant,[1] although in a supporting role only and in many respects serving to supplement similar Navy assets rather than providing a distinct set of capabilities. The participants initially attempted to develop a better understanding of the legal basis for military action, the nature of the pirates' operations, and the Navy's objectives, mission, concept of operation, and rules of engagement.

International piracy is an international crime, providing a firm legal basis for a range of U.S. military actions against the Malay pirates. The nonhierarchical nature of the pirates, however (likened more to "mold" than a "root and branch" sort of organization), was viewed as precluding the identification and targeting of so-called centers of gravity—i.e., small numbers of targets whose destruction could effectively disrupt pirating operations.

The principal Navy objective was therefore seen to be the deterrence or disruption of pirate operations and the capture of pirate vessels whenever possible.[2] An important point of law in the pursuit of this objective was that the

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[1]Participants estimated a requirement for one to two AWACS aircraft, one to two squadrons of airlift, and an unspecified number of refueling aircraft.

[2]While it was recognized that there might be a low level of air courier traffic related to piracy activities, direct U.S. military actions against the pirates were generally restricted to surface

U.S. government recognizes only a three-mile limit to territorial waters, as opposed to the twelve-mile limit claimed by many nations. A doctrine of "hot pursuit" was also authorized, however, wherein Navy vessels would be able to pursue pirate vessels into adjacent coastal waters.

Concepts of Operation

As the participants discussed the scenario, two general concepts of operation were presented, one offensive and one defensive:

- The *offensive* concept aimed to target pirates in the act of piracy or shortly after attacking innocent ships. In the view of many of the participants, the highest payoff strategy for the offensive concept of operation would be to target and deter the operations that were most costly (e.g., attacks against large tankers, cruise ships, oil platforms) rather than attempting to target smaller pirating activities.
- The *defensive* concept revolved around the establishment of temporary *cordons sanitaire*—i.e., sailing routes made safe through short-term presence and/or escort operations. These escort operations would involve only one to two days of steaming and were seen likely to be restricted to groups of large vessels and tagalongs. For sailing outside the convoying channels, larger vessels were seen to possibly benefit from the on-board presence of armed parties or helicopter gunships.[3]

Three possible locations for land-based bed-down of Air Force aircraft were identified: (1) Kota Kinabalu, in Malaysia; (2) Paya Lebar, in Singapore; and (3) Phuket International, in Thailand. In addition to patrol and airlift aircraft that would be likely to bed-down at these locations, aerial refueling aircraft would most likely be stationed there.

The creation of a joint task force (JTF) was seen to be likely, probably headed by a Navy admiral or Marine general. The participants noted that given the probable long-term nature of the military presence (estimated to be two-plus years), a shore-based headquarters would probably be set up. Involvement in the JTF by the Coast Guard was also seen as likely.

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operations. When seized, the participants warned, the pirate vessels should not be auctioned off to the highest bidder, since these craft could easily be repurchased by pirates and used again to threaten shipping.

[3]Naval ships were also likely to require the installation of on-deck small arms (e.g., machine guns) to enhance their capabilities for self-defense against the pirates.

Required Operational Capabilities

Short Term

The participants identified a number of Air Force capabilities relevant to supporting U.S. Navy and indigenous operations against the Malay pirates in the short term.[4]

Command, Control, Communications, and Intelligence. Although the participants initially believed that the Navy had adequate maritime reconnaissance capabilities in its P-3 patrol aircraft, after further discussion the presence of AWACS aircraft appeared to offer some benefits. The maritime version of the AWACS was thought to be of little assistance in tracking the small (e.g., sampan-size) traffic but was considered a necessary "building block" capability for picking up larger, moving vessels. AWACS aircraft were seen to have a longer operational range than the Navy's P-3 maritime patrol aircraft and to have some utility in coordinating the timing of convoy escort operations. Generally, AWACS aircraft were believed to be useful. Similarly, space collection assets—especially for SIGINT and ELINT—and associated capabilities for building databases of tracking data were seen to be desirable. Finally, although Navy command ships typically have ample communication capabilities, Air Force assistance in communications was seen as possibly necessary due to the large operating area that would have to be covered (roughly 500 miles by 500 miles).

Airlift. Participants thought that Air Force logistics support (primarily airlift) would be useful, including the ferrying of helicopters to the region. Discussion by the participants suggested that logistics could be set up at any one of the bed-down locations mentioned above, which would then be used as a transfer/transshipment point.[5] It was estimated that such an operation could tie up one or two squadrons of cargo aircraft.

Aerial Refueling. While the Navy was believed to have ample capabilities for refueling its own aircraft, the AWACS and airlift requirements were seen to generate an associated requirement for tankers. The tanker requirement was

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[4]Several other capabilities were discussed and either rejected or not otherwise pursued. Aerial mining of harbors was briefly discussed, but without any general sense that it would be useful in the sort of antipiracy operations envisioned here. There was a brief discussion of capabilities for visually marking pirate vessels for later identification, but the participants seemed uncertain as to how the concept would fit into operations. And transponders to assist in identification and location of commercial vessels were discussed, but it was somewhat unclear whether and how the transponders would be used, and concerns were expressed that they could be seized and used by pirates.

[5]There was speculation that some sealift might be necessary, leading one participant to note the desirability of locating in the port of Singapore, given its excellent facilities.

seen as leading to infrastructure demands (e.g., runway length, apron space) similar to those for AWACS and airlift aircraft, with a possibly greater requirement for readily available stocks and storage facilities for airplane fuel.

Longer Term

In general, the participants viewed the problem of the Malay pirates as less susceptible to solution through long-term maritime operations than through changes in the indigenous cultures and economies that shield the pirates. There was a widespread perception that the problem was deeply embedded in the culture, which led many discussants to view the situation as one that, once entered, would continue to use Air Force assets to little effect. In this regard, longer-term Air Force measures were seen as being potentially more effective. Government-to-government and military-to-military contacts especially were seen to offer promise, particularly with respect to assisting host nations in developing maritime enforcement capabilities of their own. Specifically, long-term intelligence sharing and some aspects of special operations forces (e.g., training for small-scale operations against dispersed maritime and coastal targets) were seen as offering some potential benefits.

Constraints

The participants identified a number of constraints on the Air Force's ability to contribute to Navy operations against the Malay pirates:

- As noted above, the problem of the pirates was seen by the participants to be woven into the culture, society, politics, and economies of the region and therefore not particularly well suited to a military solution. In light of this, the apparently open-ended nature of the commitment and the potential availability of alternative low-cost strategies (e.g., temporary cessation of pirating or focus on smaller traffic) for the pirates were also of significant concern to the participants.
- The Navy has strong organic capabilities of its own that are better suited to most maritime operations than are Air Force assets. For example, the Navy was seen to be unlikely to require additional refueling capabilities from the Air Force.
- Even though past operations have indicated the possibility of communication problems because of a lack of hardware interoperability, the participants were fairly confident that joint communications could be

satisfactorily established, although the likely limits on interservice communications were not fully identified.

- The availability of the necessary linguistic expertise for analysis of the multilingual message traffic was seen to be a potential constraint on U.S. operations.

Highlighted Issues

Overall, this scenario and the related discussions highlighted issues associated with the employment of military force in situations in which indigenous cultural and economic considerations play a major role and in which the targets of possible military action are diverse, distributed, and intermingled with nontarget activities, somewhat similar to terrorist or guerrilla situations. They also highlighted the opportunities and limitations of combined Air Force and Navy operations in which the Air Force would play a supporting (noncombat) role over an extended period of time.

8. The Caucasian Partition

Introduction

This scenario was developed to motivate consideration of Air Force noncombat contributions to multinational peacekeeping and peacemaking operations. Similar situations include the one in Yugoslavia, U.S. support for the Lebanese government in 1983, and situations in the Philippines, South Africa, and the Indo-Pakistani areas.

Scenario

The clashes between the Azerbaijanis and Armenians remain violent and unrelenting. The most intense fighting is associated with minority cells, or enclaves, where large groups of a minority are completely surrounded by a hostile majority. These enclaves take on the character of embattled fortresses, attracting smaller, isolated minority groups that flee to them as larger islands of safety, but also attracting the enmity of the surrounding hostile majority, which finds the enclaves offensive to their senses of sovereignty and superiority.

United Nations efforts in the fractionated Yugoslavia haunt the international community as it contemplates actions to bring peace to the Caucasus. The United Nations peacekeeping units in Yugoslavia find themselves increasingly frustrated by clashes around a half-dozen ethnic enclaves embedded within regions controlled by their adversaries. The stakes and symbolism of these enclaves increase in proportion to the blood spilled over their continued existence. The size of these enclaves is now so great that their extermination would amount to genocide. Yet their existence serves as the principal focal point for continuing violence. United Nations efforts to remove these enclaves peacefully and to establish boundaries that would be less provocative have been rejected by every one of the ethnic minorities now holding enclaves: their blood investments in these enclaves have become too high to abandon.

Britain, based upon its experiences in Palestine and Northern Ireland, is a strong proponent in the United Nations for the partitioning of the Caucasus between Armenia and Azerbaijan before their civil war recreates the conditions that frustrated the United Nations in the Yugoslavian situation. The British argue that the partitioning of Palestine, though not free of violence, led to a better

peacekeeping situation than the endless fighting over enclaves they have experienced in Northern Ireland and the United Nations Yugoslavian situation.

The common, but unprecedented, view in the Security Council is this: If the United Nations intends to bring a relative degree of peace to the Caucasus, it had better move quickly—with force if necessary—to partition Azerbaijan and Armenia into less antagonistic territorial arrangements. That will require, among other things, forcing the movement of both Armenians and Azerbaijanis out of their present enclaves and establishing a new border between the two societies that is based upon enforceability rather than history. Neither the Azerbaijanis nor the Armenians will be pleased with this imposed resolution, but the United Nations bears a responsibility to the larger, world community that has been traumatized by the breakup of Yugoslavia and now finds itself increasingly disturbed by the quarrel in the Caucasus. Moreover, the Turks may very well intervene with force if the United Nations does not.

Although the United Nations hopes to use the minimum possible force to effect the partitioning of the Caucasus, it also recognizes that it may quickly have to bring significant military resources to bear to smother any violence attending its actions. Because of several regional sensitivities, American, British, and Turkish armed troops will not be used on the ground. By agreement with all concerned, ground combat forces will be provided by Egypt, France, India, and Italy. However, logistical and technical support for some of these forces is obviously inadequate. At the request of the United Nations, the U.S. has agreed to back up the United Nations partitioning force with all the additional resources (logistics, intelligence, technical, equipment, medical, etc.) it may need. The French sniff that they can provide their own support, but the Italians and Indians are quietly relieved, and the Egyptians openly acknowledge their dependency upon others for almost everything necessary for sustainment of their troops and operations.

Discussion

The participants generally opposed U.S. involvement in this scenario, largely due to the risks associated with the unprecedented—and large-scale—forced relocation of Armenians and Azerbaijanis and the enforcement of new, internationally determined borders between the two antagonists. These risks were seen to be heightened by the probability that the operations would be opposed by both sides, leaving the force vulnerable to attacks from all quarters.

The Air Force was posited to support a United Nations operation that would forcibly relocate large populations over a wide area and enforce their separation. Initial discussion of the scenario covered the objectives of the operation (drawing

and enforcing a line between Armenia and Azerbaijan) and the composition of the ground forces (Egypt, France, India and Italy).

The multinational composition of the forces raised certain concerns about a number of C3I issues. Intelligence sharing and classification of any intelligence product (reconnaissance and surveillance, SIGINT, etc.) that the Air Force might produce in support of the operation were areas of special concern, since routine intelligence sharing with some of the nations (e.g., India) is unprecedented. Some participants also observed that the national forces of some of the contributors (e.g., the Egyptians) could require a great deal of support in the C3 arena given their austere organic capabilities.

Concepts of Operation

The multinational United Nations ground forces were hypothesized to be approximately brigade size (under 10,000) and largely facing irregular Armenian and Azerbaijani forces. They would be introduced by airlift after secure airheads were established, would be interposed between warring Armenians and Azerbaijanis, and would disarm them and, under the threat of force, move the respective populations to their new United Nations-specified homes. The airheads, perhaps twenty miles from forward-deployed United Nations forces, would be used as transshipment points for trucking supplies to the United Nations forces, to refugee camps, and to civilian enclaves.

Contributions by other elements of the U.S. government were also touched upon:

- *Army.* Army trucks might be required for carrying supplies from the airheads to forward positions and civilian populations.
- *Navy.* Similarly, Navy sealift assets might be needed to move some equipment before its staging into the Caucasus.
- *Civilian departments and agencies.* U.S. interagency planning was also seen as being necessary to handle the economic and developmental issues arising in the massive relocation, and presumably to provide economic and other inducements for Azerbaijani and Armenian cooperation. In this regard, the U.S. Agriculture, Treasury, and other departments and agencies were seen to be making their respective contributions to a relief and development program aimed at softening the hardship of the relocations.

Finally, international nongovernmental groups, such as the World Council of Churches and the International Committee of the Red Cross or Red Crescent, were seen as possibly making important contributions to the operation as well,

although the specific roles they might play were not discussed in detail.[1] There was little discussion of the joint command that would be established to coordinate U.S. military support of the operation.

Required Operational Capabilities

Short Term

A number of possible short-term required capabilities emerged during discussion of the scenario.

Command, Control, Communications, and Intelligence. Although C3I was not discussed in significant detail beyond the support that might be required by various countries contributing military forces to the United Nations forces, it seemed clear that the multinational nature of the command might pose unique C3I requirements. A sizable requirement for communications could, for example, be associated with coordinating the simultaneous transfer of Azerbaijani and Armenian populations in a manner that would minimize their contact so as to avoid clashes. Similarly, many participants felt that a single campaign plan would be required for the operation and that U.S. military assistance would be an important contribution to United Nations campaign planning. This would be especially true if the U.S. was expected to serve as provider of logistical support to the multinational United Nations operation.

Civil Affairs and Psychological Operations. Although specific Air Force contributions in this area were not discussed in detail, and the integration of U.S. assets into the United Nations command was not discussed, the unprecedented movement of large—and potentially uncooperative—enclaves of Armenians and Azerbaijanis was seen as likely to require U.S. military civil affairs and psychological operations capabilities. These capabilities would presumably be largely directed at encouraging the cooperation of the indigenous populations.

Airlift. The participants seemed to agree that the U.S. would try to provide all airlift support that was requested.[2] Initially, United Nations combat and support forces would most likely have to be airlifted into the theater and would require secure bases for their introduction and sustainment. Participants suggested that 300 to 400 Air Force personnel would be required on the ground to support the airlift operations. Several participants noted that for every combat person in

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[1]Nevertheless, they might be of great assistance in helping to manage transitional refugee camps and assuring good treatment of residents.

[2]Sealift of arms might also be necessary.

Operation Desert Storm, one ton of equipment (not including sustainment) was hauled to the theater. Although logistics is usually a national capability, in recognition of the logistical capabilities of the participating United Nations forces, some participants voiced concern about how to manage logistics as a multinational operation. U.S. airlift was seen as potentially useful in assisting United Nations national forces in delivering food and other supplies from their home countries (assistance in moving Egyptian food from Cairo, for example, was suggested as illustrative of the missions that airlift might support). A good deal of intratheater airlift was also seen as being a likely requirement.

Construction. Although not discussed explicitly, the poor state of infrastructure in the region could also require construction capabilities (e.g., airfield repair, construction of refugee camps).

Air Defense Forces. Some participants saw the possible requirement for air defense forces, although the nature of the threat (man-portable missiles, attack by aircraft) was not discussed in significant detail.

Longer Term

There was little discussion of longer-term measures that might be taken by the Air Force to facilitate missions of this sort, although it appeared that participation in multinational United Nations operations would facilitate planning, interoperability, and other aspects by providing experience through excercise.

Constraints

The participants recognized that the more combat support capabilities the U.S. provided, the more the operation would begin to look like a U.S. operation, an outcome widely perceived as having the potential to compromise the operation.

To many discussants, the operation looked very much like Beirut, where separation of belligerent forces was also required. It also offered the same risk of being identified more closely with one faction or another. For example, by putting the aerial port of debarkation (APOD) in Armenia or Azerbaijan, the United Nations command would risk being more closely identified with one side. In this regard, there was great concern about the vulnerability of U.S. (and United Nations) forces given the peacemaking orientation of the mission. For example, airlift forces were seen to be potentially vulnerable to man-portable surface-to-air missiles, and supply convoys were seen to be vulnerable to both Armenian and Azerbaijani irregulars. Forward-deployed communication

specialists and translators would also be vulnerable, as would convoys carrying supplies through the region.

The biggest airlift problem was the lack of infrastructure and support on the receiving end. The lack of infrastructure, including bad runways, was seen as posing a challenge to the establishment of an airhead and transshipment point. Similarly, the absence of a well-developed road network was seen as limiting delivery options and heightening the vulnerability of convoys. This problem led the discussants to conclude that secure, self-sustaining APODs would have to be staged in.

The availability of well-prepared staging airfields immediately outside the region also caused concern among some discussants. For example, Italy was seen to have inadequate ramp space, and Cairo West was said to pose refueling problems.

The discussants saw potential problems in the dissemination of Air Force intelligence information, pointing to the various sanitization requirements for passing intelligence to the United Nations command, to fellow members of NATO (France and Italy on the ground, Britain and Turkey possibly providing other support), to a regional friend such as Egypt, and to India, a nation whose relations with the U.S. have historically been somewhat cool.

Highlighted Issues

Overall, this scenario and the related discussion identified a number of areas in which the U.S. could play a support [illegible] multinational military operations that would be important but would raise [illegible] problems. Additionally, it highlighted some of the difficulties involved in conducting support operations where the existing infrastructures, both political and military, are relatively poor.

9. Conclusions

The objectives of the workshop on expanding U.S. Air Force noncombat capabilities were

- To explore several hypothetical future situations (scenarios) that might stress Air Force noncombat operational capabilities.
- To identify significant future systems and operational requirements for more effective or efficient noncombat operations.

We hoped that the participants would, through moderated discussions of our four scenarios (see preceding sections), develop an array of new and different mission capabilities. Although we had no expectation that such capabilities would be defined in great detail (i.e., to the extent of providing technical specifications or characteristics), we anticipated that they could be described in broad outline and could provide the basis for our subsequent and more detailed research. While our hopes were achieved to a modest degree, as indicated by the items discussed later in this section, perhaps the most significant result of the workshop was on an entirely different theme.

The workshop discussions revealed considerable disagreement among the participants about the advisability of various degrees of American or Air Force involvement in every one of the hypothetical situations posed. Indeed, that disagreement often overrode our attempts to focus the discussions on the operational and technical requirements latent in the scenarios. The extent to which that disagreement prevented the participants from fully engaging in the purposes of the workshop appears to be symptomatic of an important, deep division within the Air Force (and quite probably the other services as well) over "nontraditional," or noncombat, missions.

The divisive issue goes to the heart of what the American military institutions should be about in the future. In the most fundamental terms, it concerns whether noncombat missions are to become an integral part of the wave of the future or the ruination of both the American military institutions and the profession of arms. Addressing that disagreement and resolving the division may be the prerequisites to the future evolution of Air Force capabilities for noncombat missions. Recognition of the importance of that issue could be the most important result of the workshop.

The raising of this divisive issue was definitely not an intention of the workshop. Quite the opposite: we had specifically designed the four scenarios to pose what we thought would be compelling American interests, thereby making moot any question of whether the Air Force *should* be involved. But despite our deliberate efforts, much of the discussion kept returning to this issue. We regard the persistent salience of this issue in the workshop as an indication of its importance, not only for Air Force involvement in future noncombat operations, but also for the future development of the Air Force capabilities, technologies, and doctrine appropriate for such operations.

On one side of the issue are those who argue that the Air Force should not make noncombat operations an explicit, planned mission area. They see no problem with the use of existing Air Force combat or supporting forces for noncombat missions on an as-available basis, but they are strongly opposed to the Air Force dedicating any part of its training, force capabilities, personnel, or budget specifically to expanding or enhancing its noncombat capabilities. Fundamentally, they believe that the mission of the Air Force is to fight and that noncombat activities reduce its ability to carry out this primary mission.

Part of their concern is that effort or money spent on noncombat activities is money not spent on combat capability or training for combat. They are also dubious that Congress will accept arguments for funding that are based on noncombat mission requirements. But more importantly, they believe that noncombat operations will dilute, perhaps even undermine, the professionalism necessary to a good fighting force. They fully recognize that changes in the world will reduce the resources that the U.S. will make available to the Air Force, but they insist that such reduced resources should be fully devoted to combat capability and not squandered on noncombat activities.

On the other side are those who argue that the Air Force must expand its concept of itself and its place in the American society and should embrace noncombat operations as an important and growing segment of its mission spectrum. While recognizing that there are differences between these mission areas, they point out the training benefits of conducting noncombat operations for the Air Force's combat missions. Not surprisingly, many of the advocates of this position are members of Special Forces or of the Mobility Command. They reject the argument that the Air Force's combat capability or professional fighting spirit will be diluted if noncombat operations are carried out.

While remaining cautious about the extent of U.S. or Air Force involvement, workshop attendees who favored a proactive stance toward the noncombat missions believed that a properly configured Air Force could better serve the

nation's needs in the changing world across a broad spectrum—from traditional combat operations to providing noncombat support when and where appropriate. They appeared to be stimulated by the challenge of establishing new roles for their institutions. They argued that the Air Force is a military servant of the nation, that the nation's needs are changing, and that the Air Force's view of itself and its desirable capabilities should change accordingly.

As the participants in this debate took up their arguments and dismissed those of their opposites during the discussions, several aspects of the debate became apparent. They had heard each other's arguments before, and no one changed his mind as a result of someone else's arguments. Theirs were well-developed positions that they had argued and defended before; few stood on the sidelines. None of the American military services were immune. The workshop was an arena for an old debate, not the precipitator of a new one. And this debate took priority over attempts to discuss changing missions or operational requirements.

The major result of the workshop, then, was to highlight the depth and extent of the debate as an impediment to the exploration of expanding noncombat capabilities. Airing the debate in the workshop did little, if anything, to change the views of the participants. It is clear that the issue will need to be faced and resolved by the Air Force and the other services before the American military institutions can define the future role of noncombat operations. That resolution will probably require much more open, formal debate (including the military professional journals) and ultimately an informed, clearly articulated executive decision. If the services do not resolve the issue for themselves, it seems likely that it will be resolved for them by budgets and mandates imposed from without.

In addition to that overarching result, the workshop raised several issues more directly related to the four scenarios. One of these was whether the U.S. should undertake *any* of the support operations suggested or invited by the scenarios. The salience of that issue varied with the scenarios. It was least evident in the Tel Aviv scenario depicting the aftermath of a nuclear explosion suffered by a close ally. In the other three scenarios, there was more discussion about the extent (if any) and the type of noncombat support that the U.S. should provide.

In the Mexican scenario, the discussion reflected an appreciation of the dangers inherent in supporting a government that might not endure versus supporting demonstrators who might cause the emergence of a different government. Another aspect was the lack of a finite objective or a bounded set of military support actions for the U.S. The shadow of the Yugoslavian situation was evident in these discussions.

In the Malay pirates scenario, the issues concerned whether the U.S. should become involved in a conflict situation deeply interwoven into the cultural conditions of the area and that could involve a long-term commitment to actions of limited success. The shadow of the Vietnam experience was evident.

In the Caucasus scenario, the reluctance to become involved reflected concerns about partitioning a country, including the wholesale relocation of a large part of the population, which would make any support effort vulnerable to attacks from both sides. The shadows of the Palestinian partition and the experience in Lebanon were apparent in these discussions. Another, unexpected concern was the prospect of the U.S. operating in a coalition in which it was not in the leadership role for the expected combat operations, but instead was relegated to a support role in which its vulnerabilities could not be unilaterally controlled. Those circumstances simply boggled the mind of at least one of our military participants.

All these concerns demonstrated the importance of the political-military interfaces when contemplating noncombat support operations in such scenarios. In every case, the interdependence of political and military considerations raised questions about both the policy and the military objectives—how they could be accomplished and what the short- and longer-term consequences of American involvement would be.

Although the scenarios developed for the workshop were hypothetical, it may be presumed that they are reasonable templates for a large number of other situations that cannot be regarded as improbable or unrealistic in the changing world of the future. Given that such situations will be "messy," they will necessitate a higher degree of collaboration between policy and military planners and operators than is needed in the to-be-preferred cases in which policy objectives are unambiguous and the accompanying military support is just as unambiguously undertaken as an implementation of these objectives.

Against this background of broad concerns, the workshop participants raised a number of other issues regarding implications for the U.S. and the Air Force:

- The extent to which some of these support activities might be carried out by nonmilitary organizations. Examples included the carrying of supplies, personnel, and cargo by commercial carriers. The alternatives included the use of civilian airlines, both national and international, under charter and the use of cargo-moving companies such as Federal Express, United Parcel Service, etc. Similar possibilities exist for some of the communication requirements generated in the scenarios. The growing worldwide civilian

and private communication capabilities offer significant potential for use in situations involving both political and military activities.

- The extent to which efforts on the part of the Air Force to expand or "enhance" its noncombat support capabilities might be regarded by Congress as just another move to build up or retain resources for the Air Force. Some of the participants anticipated that there would be a debate in Congress over the proper role of the Air Force in noncombat operations for the very same reasons that had made it a major consideration in the workshop.
- The extent to which, in any future real-world situations that correspond to those discussed in the workshop, the Air Force will be compelled to operate in a coalition arrangement. It was clear that many situations in which Air Force noncombat assets could play a significant role will demand cooperative efforts with other nations across a spectrum of capabilities, such as basing, transit rights, joint and combined communications, support services, evacuation centers, and medical services.
- The extent to which precrisis plans and arrangements can and should be made. Recognizing that each of the scenarios was different, the participants discussed the degree to which the Air Force response could be enhanced by general preplanning for the type of response made. There was general awareness that some planning now exists for emergency responses to various kinds of crisis situations, but probably not for the types of stressing situations that were posited in the workshop scenarios.

Along with these issues and questions, which were significant topics in the discussions, the participants also addressed to a lesser degree an immediate objective of the workshop: to explore the scenarios in order to identify future desirable capabilities for Air Force noncombat support operations. Again, we did not attempt to define specific systems, equipment, or technical characteristics for the capabilities discussed. Rather, we sought to identify the general types of short- and long-term capabilities that could be of value in the four scenarios. The specifics for each scenario were presented in the preceding four sections. Here, by way of conclusions, we highlight only those that seem particularly significant or general:

1. *Adequate infrastructure.* As illustrated in our analyses of historical cases of noncombat operations (presented earlier), our four scenarios also demonstrated the importance of having adequate infrastructure available for noncombat support operations. In each scenario, perhaps excepting only the Mexican scenario, large amounts of material would have had to be moved

long distances, and such movements would be dependent upon terminal facilities for handling, transshipment, and distribution. In these cases, the required infrastructure was limited or inadequate, and part of the initial Air Force effort would have to be the creation of the desired infrastructure. Similarly, in several scenarios, there were requirements for massive movements of people—evacuation of American citizens or foreign refugees, resettlement of civilians, and handling of potentially large numbers of medical patients. In each case, the basing, aircraft, housing, medical, and other facilities were likely to be taxed and would need to be improved.

2. *Improved command, control, communications, and intelligence.* It is axiomatic that crises stress the C3I capabilities of the services. Although the services have made great strides in enhancing their C3I capabilities for combat operations, the workshop indicated that there is also a great need for extensive C3I capabilities in noncombat situations. Such capabilities must be able to operate in civilian-dominated, multinational, extended-area environments. They must have the capacity to deploy and set up quickly, tie into the systems of other nations, and work effectively with each other and with the capabilities of U.S. civilian agencies.

3. *Extensive psychological and civil affairs capabilities.* By design, all four of the scenarios considered in the workshop required operations in which other nations were involved. And in all four, both psychological issues and civil affairs issues played a significant role. In all cases, adapting or working with the societies and cultures of other nations would probably be instrumental to the efficiency, if not the success, of the noncombat support operations. Whether it was handling the effects of a nuclear catastrophe, participating without taking sides in a revolt, dealing with the actions of criminals embedded in a native culture, or interceding between two differing national groups, the psychological and civil affairs dimensions were evident. And this was true not only at the level of having adequate language skills, but, more importantly, at the level of understanding the culture so as to avoid actions that would be detrimental to the success of the immediate operation and the broader national goals.

4. *Desirable special capabilities.* The workshop discussions identified several desirable areas of specialized capabilities. Since these were described in earlier sections, they are not described again here. They include readily deployable nuclear detection and nuclear monitoring systems, large-scale decontamination facilities, easily transportable and erectable mass housing, airborne psychological operations communication capabilities, extended-area maritime traffic monitoring capabilities, and cooperative training programs with other nations for noncombat support operations.

Overall, we judge that our workshop on expanding Air Force noncombat capabilities did not meet our initial expectations of identifying major new Air Force capabilities for future noncombat missions. But, as is often the case in exploratory research, some unexpected results emerged. The most important of these was the exposure of the extent and depth of the debate within the Air Force (and the other services) that is seriously impeding further, detailed consideration of the evolution of future noncombat capabilities. That debate is between those who believe separate attention to noncombat missions (apart from supporting combat operations) could significantly detract from the military's primary mission of combat and those who believe that noncombat missions will become important operations in the changed world of the future. It is clear that this debate is one with which the Air Force must come to terms. What is less clear to us is the best way to do so.

Despite the division that underlies the debate, the workshop provided a basis for some Air Force actions. In all the scenarios, the Air Force attendees on both sides of the debate recognized that, *if* noncombat operations are to drive significant and specialized Air Force capabilities, it will be necessary to do a great deal of planning in order to conduct such operations effectively and efficiently. The planning and inevitable discussion of such missions will illuminate, as the workshop discussion did, the many pros and cons of the missions. And such planning and discussion could bring the debate on the advisability of specialized Air Force capabilities to the attention of higher levels of command.

This observation suggests the concept of a multistep Air Force program to bring the debate to a focus and then take appropriate actions. The program steps might include the following:

- The establishment of an activity to plan Air Force actions in noncombat operations. This planning activity would consider one or more hypothetical situations and develop a detailed operational plan for the Air Force actions that could and should be taken in such a situation. To indicate the importance of this planning activity and to legitimize it as an Air Force effort, it should be initiated at a high level, preferably at the level of the Secretary or the Chief of Staff of the Air Force, and not in a command with a vested interest in or against noncombat operations. The planning activity should be staffed by officers from the major commands that would have responsibilities in noncombat support operations, including, but not limited to, the Mobility Command, Intelligence, Special Operations, etc.
- The planning staff would have the responsibility for defining one or more potential noncombat situations (realistic scenarios) and for developing

detailed plans for responding to the situations, the incentive being that, if a plan appeared sound, yet challenging, it could become the basis for an actual Air Force noncombat exercise at some future time.

- The plan and any proposed, contingent exercise would be reviewed and expanded as necessary to incorporate inputs from the other U.S. military services, the Department of State, and other relevant U.S. agencies. To the extent feasible, relevant representatives of other nations could be invited to provide inputs. Coordination with the other services, agencies, and nations should be deliberately postponed until the Air Force has established some credible initiative and momentum, the goal being to prevent such planning from suffering a premature death at the hands of diverse bureaucratic interests.
- The planning requirements, constraints, and implications would be openly and thoroughly discussed among the planning staff and other Air Force commands and agencies as a prerequisite to the scheduling of an actual command and limited operational exercise of the plan.
- The planning staff could then be charged with periodic preparation of an appropriate situation, plan, and implementation exercise.

Such a multistep activity could provide ample input to the Air Force leadership for decisions on the extent to which noncombat operations should be an explicit, integral, and significant component of Air Force operational capabilities for the future. The value of such an effort could be that a serious debate would be resolved within the institution rather than by external or budgetary pressures.

Appendix
A. Workshop Participants

This appendix lists the non-RAND participants in the workshop and their organizational affiliations at the time of their attendance.

Mr. Max Alston	Office of the Undersecretary of Defense (Policy)/Emergency Planning
LtCol Frank Beatty	Air Force/Intelligence
Col Thomas Cardwell III	Air Force/Studies and Analysis Agency
LtCol William K. Davis	Air Force/Plans and Operations
Mr. Robert Emmerichs	Office of the Assistant Secretary of the Army/Manpower and Reserve Affairs
LtCol Sammy Henderson	Combined Arms Command, Fort Leavenworth
Col Harvard Lomax	Organization of the Joint Chiefs of Staff
LtCol Jay Marcotte	Air Mobility Command
LtCol Barbara McColgan	Air Force/Plans and Operations
Col Charles Miller	Air Force/Plans and Operations
Mr. Jacob Neufeld	Air Force/History Office
LtCol Michael Rooney	Air Force/Plans and Operations
LtCol Don Schafer	Air Force/Plans and Operations
Col Donald Selvage	Organization of the Joint Chiefs of Staff
Col Ervin Sharpe	Air University/CADRE
Col Bryant Shaw	Air University/CADRE
Capt Kevin Smith	Air Force/Studies and Analysis Agency
Maj Peter Szabo	Air Mobility Command
Maj Joseph Tatman	Air Force/Studies and Analysis Agency
Capt Jerry Thompson	Office of the Chief of Naval Operations
LtCol Phil Thorn	Air Force/Studies and Analysis Agency
Maj John Valliere	Office of the Assistant Secretary of Defense (Special Operations/Low Intensity Conflict)
Col John Warden	Office of the Vice President
LtCol Steve Whitson	Air Force/Special Operations Center, Hurlburt Field
Maj Joseph Wood	Air Force/Office of the Chief of Staff

B. Workshop Agenda

This appendix presents the working agenda of the workshop. It does not include breaks, working lunches, social activities, etc. All individuals named are RAND staff members.

Day One

0930	Welcome	Dr. Milton Weiner
0935	Introductory comments and project overview	Mr. Carl Builder
0945	Around-the-table introductions	All attendees
1015	Analysis of USAF forces over the years	Dr. Kevin Lewis
1100	An Overview of selected Air Force noncombat operations	Dr. Robert Lempert
1130	Description of workshop procedure	Mr. Carl Builder
1300	Situation 1, scenario and discussion	Mr. Carl Builder, moderator
1415	Situation 2, scenario and discussion	Mr. Carl Builder, moderator
1615	Review discussion	Dr. Milton Weiner

Day Two

0945	Situation 3, scenario and discussion	Mr. Carl Builder, moderator
1115	Situation 4, scenario and discussion	Mr. Carl Builder, moderator
1330	Overview: observations and conclusions	Dr. Milton Weiner Mr. Eric Larson All attendees

C. An Extension of the Workshop: A RAND Seminar on the Uses of Air Power in Yugoslavia

Background

Following the completion of the workshop on expanding Air Force noncombat capabilites and as a part of our Project AIR FORCE effort to explore the potential contributions of air power in nonstandard missions in the post-Cold War era, we conducted an exploratory seminar on the topic, What could air power do to help in the situation in Bosnia? The seminar was held on Tuesday, August 25, 1992, at the RAND offices in Santa Monica and was attended by a small group of RAND staff members. The procedure used in the seminar generally followed that of the previously held workshop, i.e., it was a moderated discussion of a specific scenario.

For the scenario, we took the Bosnian situation as we found it on that date: an unstable situation involving the shelling of major cities, constricted access for humanitarian airlift, unsuccessful European Community mediation, public/media pressure for the United Nations/U.S. to "do something," etc. We then posed the question just as the national leaders might pose it to the Air Force leadership: What can air power offer in the way of options (i.e., a capabilities menu, not a plan) to help ameliorate the situation in Bosnia?

The participants accepted the fact that the choice of means in such situations depends not only upon the presumed national ends, but also upon the available means. The national leadership is entitled to ask what the military *can* do, quite apart from what the leadership may eventually decide it wants to do or will do.

Although U.S. involvement, especially military involvement, in Bosnia was at that time and continued to be a controversial prospect, we hoped the seminar participants would accept the question as a hypothetical situation worthy of exploration. We did not want to get hung up on whether the U.S. *should* get involved or whether we think various goals are wise or achievable. We were more interested in what capabilities of air power are feasible and pertinent to the Bosnian situation and where there are limitations, rather than in discussing what courses of action would be proper or successful.

All roles that air power might play could be discussed—from humanitarian relief to the destruction of military or value targets, from the delivery of medicines to

nuclear weapons, and from electrons to bullets. We considered the current inventory capabilities of air power, as well as those capabilities that could easily be provided by adapting current technologies, vehicles, or systems.

Our desire was to instigate a wide-ranging discussion in which the seminar participants would be free to speculate and innovate on a complex problem of world significance. Our hope was to illuminate or devise a new way to make air power more relevant or contributive to the face of conflict that seems to be emerging in the Balkans and Caucasus (and that was not recognized earlier in Lebanon or Belfast or the South African townships).

In view of the limited time (a few hours) devoted to the seminar, any "findings" had to be considered preliminary and "indicative" rather than definitive.

Findings

Three broad items stood out as a result of the seminar discussions, reiterating items that had also been evidenced in the workshop.

First, if air power is ever to be brought to bear upon these kinds of conflicts with great effect, the key capabilities are the information (intelligence, surveillance, command, control, and communication) systems pertinent to any and all military operations in such conflicts. Currently, military C3I systems are mostly framed for and oriented toward regular, conventional conflicts and operations—not irregular, unconventional conflicts and operations. The targets, backgrounds, objectives, and operations may all be quite different. If those C3I systems are reframed for and reoriented toward irregular, unconventional conflicts (a big and important undertaking), they may be able to facilitate several capabilities pertinent to such conflicts:

- Most obviously, support of the effective application of military force via their use as prerequisites for targeting, operations planning and evaluation, etc. (the traditional military uses of C3I systems), as was done in Desert Storm.
- The exploitation of psychological, diplomatic, and public opinion data (i.e., waging the conflict in other venues), such as the use of satellite imagery at the United Nations during the Cuban missile crisis (e.g., "Let us show you what these people are really doing").
- Informing political leaders of the nature of the conflict and therefore aiding them in their consideration and selection of options and other national instruments, such as trade sanctions, blockades, etc.

Thus, C3I capabilities that can effectively bring any kind of weaponry to bear may break the back of the violent aspects of a problem *before* weapons are brought to bear, and may even preclude the need to resort to weapons. In other words, such capabilities may be sufficient, in and of themselves, to change the face of these kinds of conflicts. If snipers cannot snipe without being observed, identified, and targeted, they may not want to risk sniping. The same holds for mortars and artillery. Getting such C3I capabilities, however, is far from trivial.

The second broad item that emerged was that given adequate C3I systems and information capability, the most important operational concept for air power in these diffuse conflicts is the ability to *temporarily* secure any chosen space, spot, or area on the surface—even one of a limited size (e.g., a football field or a length of roadway) and even if only for a few minutes. Conventional military operations usually presume the taking and holding of land. In irregular, unconventional conflicts, the taking and holding of land may not be effective; it may even be counterproductive, if it leads to forces being pinned down and taking casualties. Much of what needs to be done in irregular, unconventional conflicts may only require temporary presence and actions, undertaken quickly, before opposition can be organized and brought to bear. If air power has the capability to temporarily secure any chosen space on the surface against intrusion or hostile fire, then that capability can be exploited in a number of ways:

- To insert supplies and aid and to remove personnel from harm.
- To neutralize offending forces in the act of offending.
- To seize arms or supplies in storage or in transit.
- To protect land convoys in a "moving bubble" of security.
- To threaten or strike targets of value as hostages against offending behavior.

Thus, instead of thinking about military power to destroy targets or seize and hold ground, the U.S. should be thinking about how military power can be used to *exploit* a limited site on the surface for a limited time.

The third and final broad item was that given the capabilities to bring air power to bear with effect upon such conflicts, it is important to seek neutral ways to apply military force. Neutrality implies that an action (e.g., the firing of a gun) rather than the side one is on (e.g., Bosnian or Serb) is the basis for counteraction or sanctions. For example, when police encounter urban street gangs in conflict, they do not try to take sides (e.g., "Are we on the side of the Crips or the Bloods?"), instead going after anyone shooting a gun. Regular, conventional warfare implies the use of force on one side or the other. Peace enforcement

implies that air power may be applied against anyone who breaks the peace by firing a weapon, regardless of purpose or target. That kind of neutral air power capability may be much more positively sought and accepted by United Nations peacekeeping forces. That kind of thinking about the application of air power—and its implications for C3I systems—would be a revolutionary change, truly constituting a new operational concept for air power.

From these considerations, three conclusions seem justified:

1. If you can handle the C3I problems these conflicts pose for the application of force, you may have broken their backs even without using force. A corollary: If you can really plan (i.e., you have the information necessary to plan) such complex and unconventional military operations, the necessary equipment is likely to be much easier to obtain.
2. Try not to think about taking and holding ground. Rather, think about securing and using the ground in small bites of time and space.
3. Try to think about actions that are independent of taking sides in such conflicts. Conceive of actions that are triggered by the actions or behavior of all parties to the conflict rather than by the side chosen or the opportunity presented.

Two additional observations can be made. First, it is interesting that none of the capabilities we discussed are in hand today. They are all suggestions for how the Air Force might begin to reshape itself to be more responsive to similar situations in the future. The doctrinal and cultural changes required may be enormous. Indeed, the current military institutions may not be able to get from here to there without being traumatized.

Second, something that is obviously relevant is the notion that this kind of "warfare" demands an exceptionally close interaction between the political and military players. Everyone recognizes the basic truth that warfare is an extension of political aims, etc., and everyone is used to employing political agents in war games. However, there is a natural tension between political and military leaders. The Western world still tends to operate mostly on the notion that political leaders should set broad guidelines and then turn the military loose. But the kind of situation represented by Yugoslavia will demand an exceptional degree of interaction and cooperation between the two groups, right down to planning and controlling events on an hour-by-hour schedule. Thus, one of the needed changes for coping with the new face of conflict is the forging of close ties between the Department of Defense and the Department of State—connections

that would permit effective participation (i.e., contributions rather than interference) by the political leaders in future military operations.

And not only will closer cooperation between the instruments of the U.S. government be challenging. Future cooperation between nations in coalitions and under United Nations mandates will require a compounded web of interagency and international ties. The new world may or may not be less dangerous, but it certainly will not be less complex.