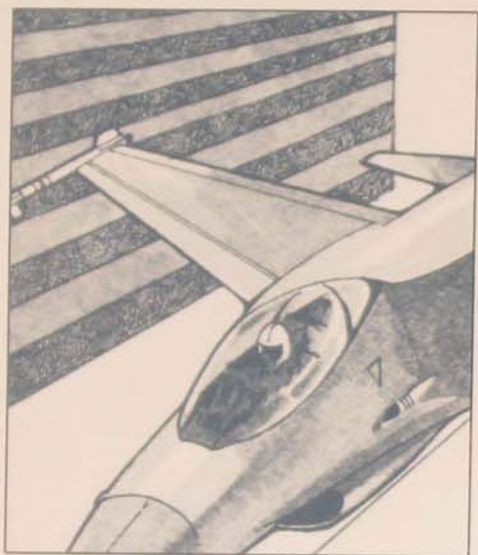


AIR
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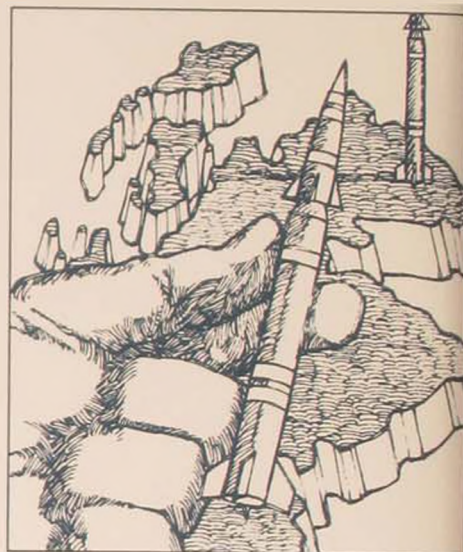




If the United States stands for peace, why must it build new missiles and bombers?—page 26



A brilliant tactical success of 1981 may prove troublesome in Israel's future.—page 35



Will our search for war-fighting deterrence hurt our allies more than our opponents?—page 69

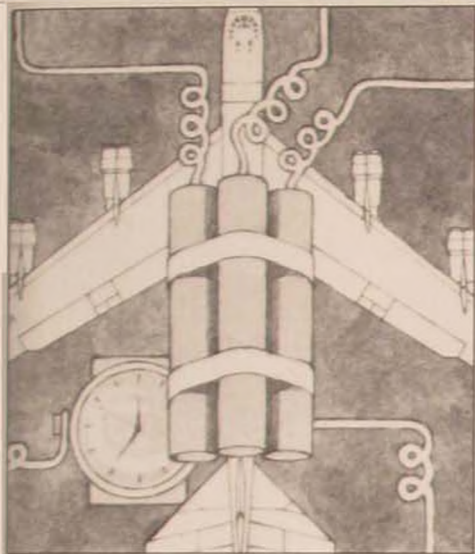
Attention

Since modern warfare is continuously changing, Air Force leaders must be constantly alert for new ideas that might be the key to the successful application of aerospace power in the future. The *Air University Review* is the professional journal of the United States Air Force and is designed to serve as an open forum for exploratory discussion of professional issues and the presentation of new ideas. As an open forum, the *Review* aims to present new ideas and stimulate innovative thinking on military doctrine, strategy, tactics, professionalism, and related national defense matters. The views and opinions expressed or implied in this journal are those of the individual authors and are not to be construed as carrying the official sanction of the Department of Defense, the Air Force, Air University, or other agencies and departments of the U.S. government. Thoughtful and informed contributions are always welcomed.



AIR UNIVERSITY **Review**

September-October 1984 Vol. XXXV No. 6



"We are ready to blow up this base. We want a B-52." Is your base prepared to respond?—page 80

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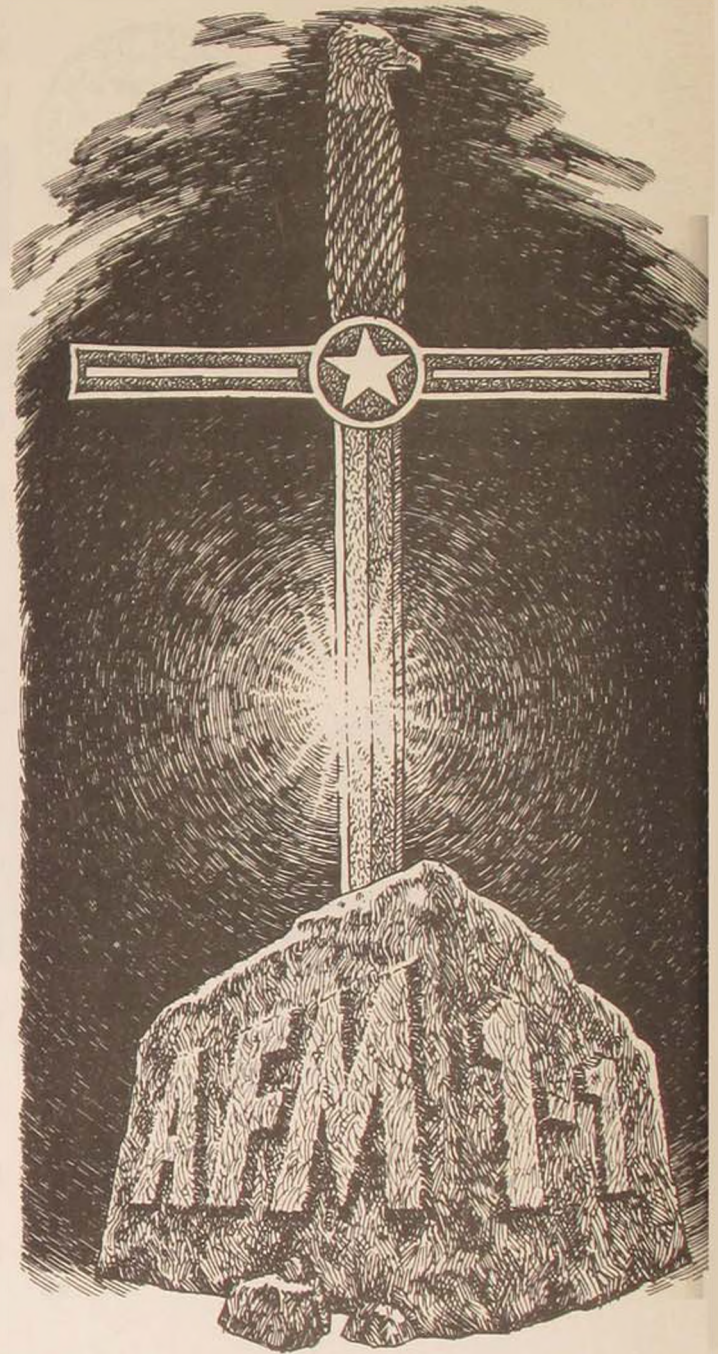
UNFINISHED BUSINESS

The Air Force continuously refines aerospace doctrine to make it relevant to present operations and viable for future contingencies.

AFM 1-1, 5 January 1984, p. vii

FOR the past thirty years Air Force officers have benefited from I. B. Holley's research and teaching on doctrine. Many of his ideas have shaped the framework of military doctrinal debates in the United States and have become part of the mainstream of Air Force doctrinal thinking. From his classic study *Ideas and Weapons* (1953), we learned that it is essential to institutionalize the rigorous analysis of experience and to use the results of the analysis process as the basis of our doctrine. His 1974 Harmon Memorial Lecture reminded us that developing sound doctrine is an "Enduring Challenge," a task never finished. Both of these ideas can be found in the latest edition of AFM 1-1, *Basic Aerospace Doctrine of the United States Air Force*.

The new manual is a marked improvement over the 1979 version, which had several flaws. The earlier edition apparently attempted to include something for every constituency in the Air Force. As a result, it lacked the focus one expects in a manual purporting to explain how aerospace power is used in war. Basic doctrine was buried among extraneous image-building and irrelevant discussions of the Triad, the total force, education and training, and personnel management. Additionally, the number and types of illustrations accompanying the text tended to discredit any claim the manual might have had to being a rigorous treatment of a complex, fundamental, life-or-death matter—basic doctrine. The overall result was a manual that pointed to an organization apparently more



concerned with training, organization, and equipment than with warfighting—an emphasis that is exactly what military professionals must guard against in a peacetime environment.

Reflecting the spirit of the Warrior Program, the latest edition of 1-1 gets down to serious business immediately and focuses throughout on the role of aerospace power in war. Doubtless, there will be ideas in the manual that will elicit disagreement. But of this, there can be no doubt—the manual

clearly lays out a basic military doctrine, a body of beliefs about how best to employ aerospace power in war.

Gone is the puffery of the 1979 edition. There are few quotations in the new manual, and those that appear obviously belong, coming from the likes of LeMay, Douhet, and Clausewitz. Gone also are the numerous illustrations that led some to speak of "cartoon doctrine" when the 1979 manual was published. Another refreshing aspect of the 1984 version is that it speaks candidly of war and victory. Passages like this one remind us all that we are in a military organization that is part of the cutting edge of the sword of the Republic.

The conduct of war is the art and science of using military force with other instruments of national power to achieve victory. Military victory is normally the decisive defeat of an enemy which breaks his will to wage war and forces him to sue for peace. In a broader sense, the attainment of stated objectives, limited or total, defines victory. (p. 1-1)

These changes alone are enough to alter the tone of the manual radically and give this edition much greater credibility than its predecessor.

A more elaborate review of the new 1-1 is contained in the second article in this issue, by Colonel Clifford R. Krieger. This article not only reviews the new manual but emphasizes the historical underpinning of Air Force doctrine. In one of his more important observations, an observation that echoes the ideas of Professor Holley, Krieger notes that Air Force doctrine is never finalized. Even as the new edition of 1-1 hits the streets, there are unresolved questions that will eventually make their mark on doctrine. Krieger maintains that

professional officers throughout the Air Force have a responsibility to contribute to the effort to clear up such matters and help refine our Air Force doctrine.

The lead article in this issue may be considered an effort to help in the refinement of the January 1984 AFM 1-1, which, like all doctrine manuals, will need to be revised some time in the future. In this article, Lieutenant Colonel Barry Watts and Major James O. Hale fault air power leaders for developing doctrine that tends to be composed principally of abstract definitions of roles and missions and fails to give sufficient consideration to combat experience. Moreover, the nature of this doctrine bespeaks a perception of war that does not give adequate recognition to the unknowns that are produced by war's fog and friction and the enemy (i.e., an animate object that reacts). The result, the authors believe, is a rigidity in the Air Force way of war that tends to inhibit appropriate modifications of doctrine in response to the everchanging circumstances of war.

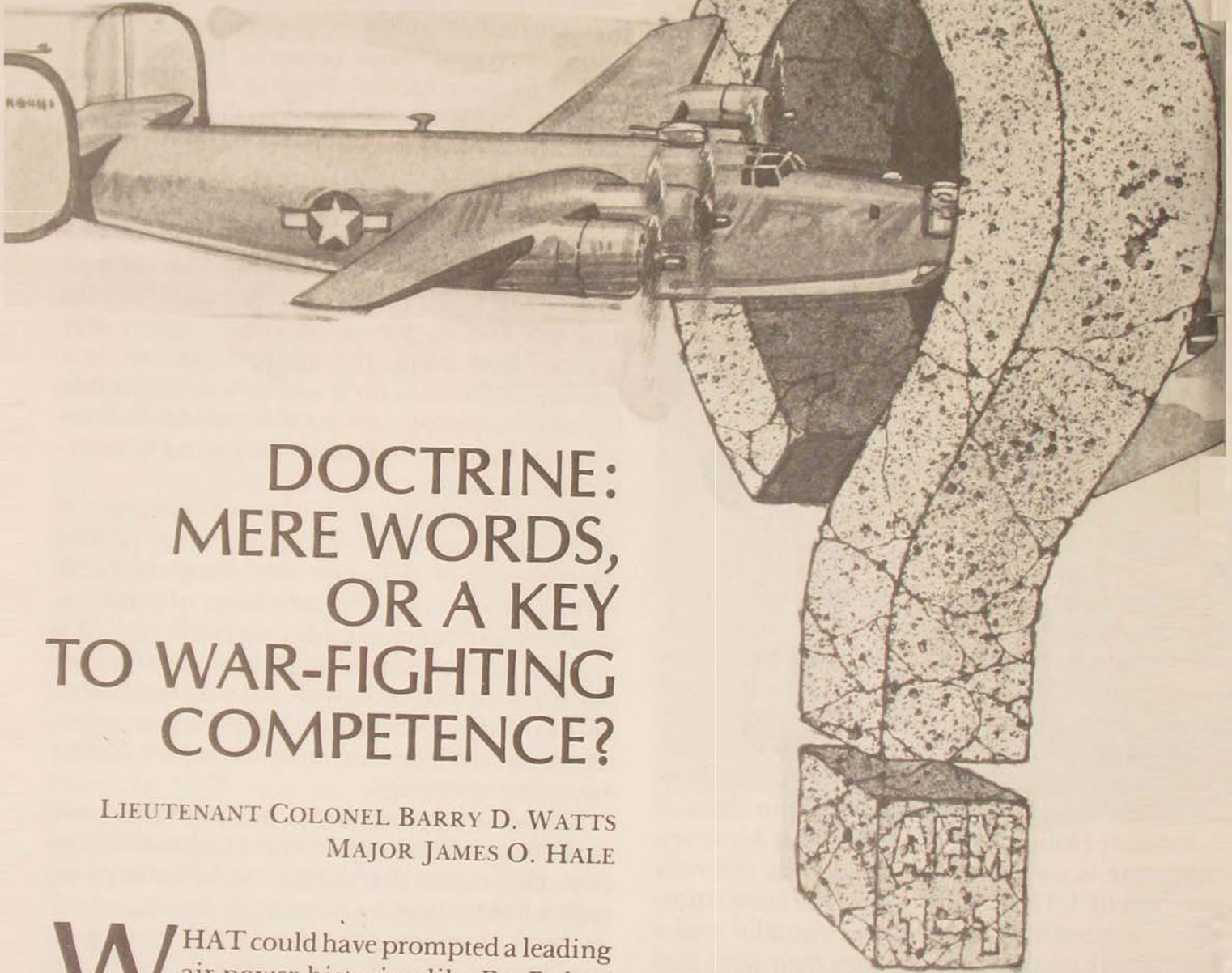
The publication of these two articles on doctrine, coming hard on the heels of the appearance of the new 1-1, illustrates well some fundamental characteristics of doctrine itself—it is indeed an enduring challenge. We at the *Review* hope that the two articles on doctrine in this issue will make a significant, perhaps lasting contribution to the process of rigorous analysis that must be a part of the enduring challenge.

As we work to refine our doctrine, we would do well to keep in mind Colonel Krieger's observation that there is no *best* doctrine, only a better one.

D.R.B.

Somewhere, somehow in the late 1950s, the quest for Air Force doctrine began to go stale in the very years in which dynamic studies were needed to integrate new aerospace ideas into the main body of Air Force thinking.

Robert Frank Futrell, 1971



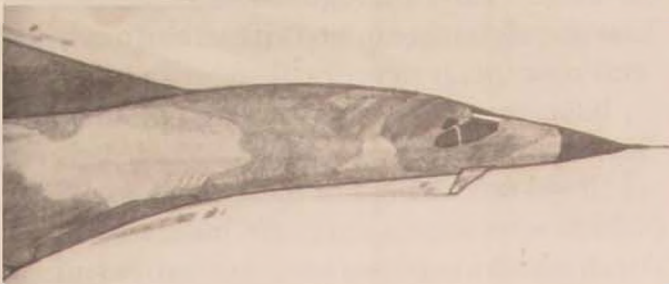
DOCTRINE: MERE WORDS, OR A KEY TO WAR-FIGHTING COMPETENCE?

LIEUTENANT COLONEL BARRY D. WATTS
MAJOR JAMES O. HALE

WHAT could have prompted a leading air power historian like Dr. Robert Futrell to conclude that the Air Force's doctrinal quest went stale during the 1950s and, worse, that even by the early 1970s, the young service had failed to perfect "semantic thought patterns" encompassing the totality of its rationale?¹ Insofar as Dr. Futrell's 1971 assessment remains valid today, part of the answer seems to lie in his awareness that the Air Force's basic doctrinal beliefs have remained

essentially unchanged since World War II (and can trace strong roots back even further). All too often since 1947, the keepers of U.S. air power doctrine have viewed their inheritance as holy writ more in need of protection than of evolution or change.

Of course, this lack of change in our basic doctrine is not, in itself, proof that the doctri-



nal quest has gone stale. Those who defend this lack of evolution tend to argue that by 1943, if not earlier, American army aviators had developed a good idea of what usually worked best and thereafter wisely stuck with that.²

On reflection, though, this explanation raises more questions than it answers. First, is it self-evident that what did the job in World War II (or in Southeast Asia) will do so today? One of the most fundamental air power ideas developed at the Air Corps Tactical School³ during the 1930s was that precision bombardment alone could swiftly destroy the means or will of an enemy society to wage war.⁴ But today, against a nuclear-armed adversary like the Soviet Union, is a conventional bombardment campaign of the sort envisaged by Tactical School theorists feasible at all? How, in particular, could we prevent such an operation from simply provoking the very thing we dread most, an all-out nuclear exchange?

Equally important questions can be asked about documents like Air Force Manual 1-1. Are the basic concepts and principles in the more recent versions of this manual discussed

or debated by those in operational units? Do Air Force professionals genuinely believe that officially sanctioned doctrine would promote, rather than hinder, successful combat performance in a future conflict? Indeed, is there even much consensus within the Air Force about what our core war-fighting principles are or our basic doctrinal concepts mean?

At the heart of the present authors' misgivings about the health of Air Force doctrine is the suspicion that our service's doctrinal quest has become entangled in abstract questions of definition that lead nowhere, while the practical problems of actual warfighting have been neglected. Is doctrine preeminently a peacetime tool for developing force structure? Or does it also have an important, perhaps even crucial role to play in battle? These are questions that every generation of American aviators has raised. But truly final answers have not been forthcoming.

Consider the problem of defining doctrine's essence. In his pioneering 1955 book *U.S. Military Doctrine*, Brigadier General Dale O. Smith accepted the proposition that Air Force thought progresses from the nebulous ideas of individuals, to unofficial concepts (or hypotheses), to doctrines taught at service schools and sanctioned at the highest military staff levels, to enduring principles.⁵ And while General Smith admitted that the exact point at which an idea becomes a concept (or a concept, a doctrine) may not always be clear, his formulation of basic doctrine as the fundamental beliefs of Air Force people about "the development, deployment, and employment of aerospace power in peace or war" seemed at the time to settle once and for all what doctrine is.⁶ But as the title of General I. B. Holley's recent article "Concepts, Doctrines, Principles: Are You Sure You Understand These Terms?" implies, serious definitional problems persist.⁷ General Holley insists that the official definition of doctrine long promulgated by the Joint Chiefs of Staff is confusing, if not erroneous. Evidently, despite three decades of effort, we have still not pro-

gressed beyond the definition of basic terms. And if so, then one cannot help but wonder whether we have been working on the right questions.

Yet if we have been asking the wrong questions about doctrine, what questions should we be raising? Perhaps it would be helpful at this stage to stand the problem on its head and consider what doctrine is not. If we could first ascertain some of the things that doctrine cannot be, we might have a better basis for making some sense of this elusive concept.

The Problems of Defining Doctrine

How can a man understand the name of anything, when he does not know the nature of it?

Plato, *Theaetetus*

The truth lurks in the metaphor.

Anthony Athos, quoted in
In Search of Excellence, 1982

One thing that doctrine *is not* is a concept that can be exactly defined in a natural human language such as English or German. While it is customary to assume that a notion like doctrine must be unambiguously defined before it can be intelligently discussed, no general theory of definition capable of providing unassailable answers to a question like "What is basic doctrine?" exists. Consequently, efforts to ground doctrinal development on an exact account of what doctrine *is* are doomed from the start.

(*Authors' Warning:* The next half dozen paragraphs or so contain a rigorous substantiation of our skepticism about the utility of precise definitions as the point of departure for doctrine. Those readers who do not need further convincing, who regularly fly warplanes for a living, or whose eyes glaze over at the mere mention of JCS Publication 1, *Dictionary of Military and Associated Terms*, may wish to skip ahead.)

The problems encountered in trying to define general concepts have been with us since Plato's early dialogues.⁸ The structure and outcome of

these early works are monotonously similar. First, the participants begin to discuss some broad ethical question, such as "What is the nature of courage?"⁹ Next, they make a number of attempts to define (in the abstract, not in particular cases) the idea or concept at issue. But after intense Socratic questioning, the participants find that the proposed definitions always turn out to be faulty.¹⁰ Hence, the upshot of Plato's early dialogues is that the abstract essence of courage, piety, virtue, and other general concepts is never explicitly determined.¹¹

It has been some centuries since Plato walked the streets of Athens, and the reader may be inclined to assume that these problems of definition were solved long ago. Indeed, as a practical matter, need we look any farther than a good dictionary?

But dictionaries, disappointingly, offer less help than might be supposed. The problem is that dictionary definitions are circular in that, sooner or later, they define every word in terms of itself. This circularity holds even for concepts drawn from that most rigorous of all branches of human knowledge, mathematics. Take the intuitive notion of a set as it has been used in mathematics since Georg Cantor originally characterized it, around 1895, as "any collection into a whole (*Zusammenfassung zu einem Ganzen*) *M* of definite and separate objects *m* of our intuition or our thought."¹² *Webster's Third New International Dictionary* defines this particular sense of "set" as "a collection of things and esp[ecially] mathematical elements (as numbers or points)."¹³ But in this context the explicit synonym for "collection" turns out to be "aggregate," and when we look up "aggregate" we find it defined, in turn, as "a set of mathematical elements."¹⁴ So all the dictionary can ultimately do is lead us around closed loops of synonymous terms and phrases.

Regardless of how vicious or benign we deem this sort of circularity, cannot mathematicians themselves specify unambiguously what a set is—at least for mathematical purposes? Certainly Cantor's notion of a set as any collec-

tion into a whole of definite and separate elements of our thought or intuition *seems* straightforward enough. However, as Bertrand Russell discovered in 1901, Cantor's definition of "set" is not merely unclear but permits outright contradiction. The difficulty, now known as Russell's paradox, arises from noticing that many sets do not contain themselves. Then, when we ask whether the set of all sets not containing themselves contains itself, the answer that logically follows is that it both *does* and *does not*.¹⁵

What this paradox demonstrates is that the general problems of pinning down in words the precise meanings of abstract concepts were not discernibly closer to solution in 1901-02 than they had been at the time of Plato's early dialogues. Moreover, we see no signs of major progress toward their solution in the decades since the discovery of syntactic paradoxes like Russell's. As the philosopher Raziel Abelson summarized the situation in 1967:

The problems of definition are constantly recurring in philosophical discussions, although there is a widespread tendency to assume that they have been solved. Practically every book on logic has a section on definitions in which rules are set down and exercises prescribed for applying the rules, as if the problems were all settled. And yet, paradoxically, no problems of knowledge are less settled than those of definition, and no subject is more in need of a fresh approach.¹⁶

Lastly, note that the successful development since 1901 of formal or axiomatic approaches to set theory that avoid the known paradoxes reinforce, rather than undercut, Abelson's conclusion that a general solution to the problems of definition continues to elude us.¹⁷

For those who may feel inclined to dismiss this entire problem as only of relevance to ivory-tower academicians, we would offer two cases that strike somewhat closer to home. Consider, first, the notion of battlefield air interdiction (BAI). As a term, *BAI* seems to have been introduced in an attempt to explain better air power's contribution to the ground battle, especially in what had come to be seen as an

ill-defined gray area between close air support (CAS) and air interdiction (AI). But despite literally years of effort to nail down a notion introduced to explain two others, we see little evidence of a definition of BAI's abstract essence that the various interested parties in this country and among our allies could all unequivocally accept.¹⁸

More substantive disagreement about the essence of *doctrine* can be seen in the fundamental difference between American and Soviet usages of the term. Since 1947, the notion of military doctrine generally accepted within the Department of Defense has centered around the allocation of roles and missions among the various services. Air Force basic doctrine, in particular, has focused on defining Air Force missions, describing air power's special characteristics, and explaining the need for an independent air force.¹⁹ The view of military doctrine (*voyennaya doktrina*) that has held sway in the Soviet Union since the 1960s, by contrast, deals with a level of military thought far above the missions or characteristics of individual services. As reiterated in 1982 by then-Chief of the General Staff Marshal Nikolay Ogarkov, Soviet military doctrine is "a system of guiding principles and scientifically substantiated views of the CPSU [Communist Party of the Soviet Union] and the Soviet government on the essence, character and mode of fighting a war which may be forced by the imperialists on the Soviet Union."²⁰ Superficial differences in nomenclature notwithstanding, there is very little common ground between American and Soviet views of military doctrine's essence. Among other reasons, the highest echelon at which the Soviets do permit service-specific doctrine, the operational level of fronts and armies (*operativnoye iskusstvo*), has not been seriously discussed by U.S. airmen.²¹ Indeed, we have yet to recognize it as militarily important.

Returning to what doctrine *is not*, should Air Force doctrinal discussions begin by trying to define in the abstract what doctrine *is*? Our

answer must be: definitely not! General Holley has written that the search for sound military practice is *certain* to be seriously flawed without uniform, clearly understood definitions of terms like *doctrine*.²² But in the absence of a solution to the long-standing problems of definition, we would answer that the only outcome this insistence seems certain to ensure is that the Air Force's quest for sound military practice will continue to flounder. At the outset of any doctrinal foray, our best efforts at formal, abstract definitions are seldom much more than hunches; and even after long study, no one has been able to offer much more than metaphors. Thus, to insist that doctrinal thinking begin with formal, once-and-for-all definitions seems roughly akin to demanding that mathematics proceed from the solution to problems, such as exactly trisecting an angle with straightedge and compass alone, that are known to be impossible.

Yet if we cannot explicitly nail down the abstract essence of concepts like BAI and doctrine, how can doctrinal development ever be given an adequate foundation? How, indeed, can we even communicate? The dilemma is not insoluble. Combat experience appears to offer a practical way out that is "good enough" for purposes of warfighting.

Combat Experience

We have identified danger, physical exertion, intelligence, and friction as the elements that coalesce to form the atmosphere of war, and turn it into a medium that impedes activity. In their restrictive effects they can be grouped into a single concept of general friction. Is there any lubricant that will reduce this abrasion? Only one . . . combat experience.

Carl von Clausewitz, *On War*

. . . with increasing frequency, I'm seeing combat needs being contaminated by a lot of theoretical hogwash.

Brigadier General Eugene Lynch, USA (Ret), 1983

The second thing that doctrine *is not* is something that can be safely cut off from the

uncompromising evidence of the battlefield. Any attempt to develop concepts, doctrines, or principles for the actual practice of war that fails to ground itself squarely in concrete battle experience risks outright disaster.

To insist that there is little to be gained from trying to nail down a notion like doctrine in words does not mean that one is unable either to produce obvious examples of doctrinal statements or to subject these statements to the test of experience. For example, consider Brigadier General Kenneth N. Walker's famous maxim that a well-planned and well-conducted bombardment attack, once launched, cannot be stopped.²³ In the hands of Air Corps Tactical School bombardment advocates, this assertion was eventually construed to mean that bombers like the B-17 Flying Fortress could be sufficiently self-defending to penetrate enemy defenses and bomb the target without unacceptable or uneconomic losses.²⁴

What we would emphasize here is the historical lack of support in actual combat experience for this bomber penetration doctrine. The first missions of the American daylight bomber offensive from the United Kingdom were flown in August 1942. By October of that year, the senior leaders of the U.S. Eighth Air Force were "absolutely convinced," based on the command's experiences against targets in France and the Low Countries, that a force of 300 or more unescorted heavy bombers could "attack any target in Germany with less than 4 percent losses."²⁵

It took time, though, to build up the force structure in England necessary to raise Eighth's dispatchable bomber strength to the 300-plus level. For a variety of reasons, it was not until the summer of 1943 that Eighth Air Force's Commander, General Ira C. Eaker, managed to accumulate enough B-24s and B-17s to begin putting the idea of self-defending bomber formations to the test.

The bitter dénouement of this grand doctrinal experiment in early October 1943 is well known. Without fighter protection all the way

to the target, the bombers proved far more vulnerable than had been calculated. Over the period 8-14 October 1943, Eighth Air Force mounted four all-out efforts to break through the German fighter defenses unescorted. Since a total of 1410 heavy bombers were dispatched, losses should not have exceeded fifty-six B-17s and B-24s, according to doctrine.²⁶ However, Eighth lost 148 bombers and crews outright, mostly as a result of determined opposition from Luftwaffe fighters.²⁷ Adding in the fifteen additional heavies that returned damaged beyond economical repair, these four missions cost Eighth Air Force 21 percent of bombers on hand in its tactical units and at least 31 percent of its heavy-bomber crews.²⁸ As General Holley justifiably said in his 1974 Harmon Memorial Lecture, "The vigor with which *Luftwaffe* pilots subsequently pressed . . . attacks on 8th . . . formations over *Festung Europa* provides all the commentary that is necessary for this particular bit of doctrinal myopia."²⁹ Although Eighth's bombers had not been turned away from their targets, General Walker's penetration doctrine had failed the test of World War II battle experience in the specific sense that German fighter defenses had shown themselves able to impose unsupportable losses on the American bomber formations.³⁰

Even more significantly, the Army Air Corps' prewar penetration doctrine also lacked justification in *prior* combat experience from World War I. During the early years of the Air Officers School at Langley Field, Virginia, when the experience of the Great War was still heavily relied on, the prevailing view among the instructors had been that pursuit (fighter) aviation dedicated to gaining and holding control of the air was a necessary prerequisite for successful bombardment operations. The school's texts up to 1927 made this point clear:

Pursuit in its relationship to the Air Service . . . may be compared to the infantry in its relationship to the other branches of the Army. Without Pursuit, the successful employment of the other branches is impossible.

Pursuit aviation will provide the main protection for Bombardment aircraft.³¹

So to suggest that the main reason for the doctrinal myopia regarding bomber penetration that came to dominate Air Corps Tactical School thinking during the 1930s was insufficient experience seems dubious history at best. Admittedly, from the standpoint of tactical detail, bombardment enthusiasts such as General Walker (and later, General Eaker himself) did make their theoretical extrapolations from "a virtually clean slate."³² Also, in the context of their heartfelt desire for autonomy from the U.S. Army, it is easy to understand why these same air power crusaders tended to be overly optimistic where the emerging technology of the B-17 was concerned.³³ But in a more fundamental sense, *they* were the ones who chose to erase the slate of experience.

This conclusion may seem harsh. Certainly, the various American airmen who advocated daylight, precision bombardment during the 1930s and early 1940s would be on firm ground in pointing out that World War I produced precious little empirical data on large-scale, sustained bombardment operations against the industrial heart of an enemy nation. Yet to accept this explanation as an adequate defense of bomber invincibility is to interpret the word *experience* in a dangerously narrow way. The seminal flaw in the doctrine of bomber invincibility was not a lack of empirical data either about large-scale bombardment operations or the aircraft technologies that had emerged by the outset of World War II. Rather, it was the refusal of American airmen, *as a matter of basic doctrine*, to recognize that in real war, as opposed to war on paper, one must interact with an animate adversary who is motivated, literally on pain of death, to respond in surprising and unpredictable ways.³⁴ In their headlong rush to prove that strategic bombardment could be decisive, Eighth's bomber leaders were tempted to act as if, contrary to all past experience, they had forged an offensive weapon

against which no enemy could defend successfully.³⁵

Is it reasonable to suggest that American bomber enthusiasts might have read the record of past wars less narrowly, less parochially? All we can say is that during the 1920s and 1930s there were those who clearly did. As a case in point, we would offer the following excerpt from a 1936 U.S. Army translation of the introduction of the German army's field service regulations (or *Truppenfuehrung*) of 1933:

Situations in war are of unlimited variety. They change often and suddenly and only rarely are from the first discernible. Incalculable elements are often of great influence. The independent will of the enemy is pitted against ours. Friction and mistakes are of everyday occurrence.³⁶

It is difficult to overstate the profound difference between the Clausewitzian image of war so vividly articulated in this brief passage from the 1933 German *Truppenfuehrung* and a notion like the Army Air Corps' dictum about bomber invincibility.

In any event, the lesson concerning doctrine's intimate relationship with combat experience should, by now, be apparent. As episodes like Eighth Air Force's costly failure in October 1943 to penetrate German air defenses unescorted demonstrate, flawed doctrine can cost lives. And the shortest road to flawed doctrine is to develop it in the abstract, that is, without sufficient attention to the unpromising realities of battle.

Doctrine as *Fingerspitzengefuehl*

To win, you've got to take risks. How does a commander tell which risks are worth taking? He has a lot of conflicting inputs. But computers don't give the answer. Nor does intelligence. None of them gives the answer. In Israel, it's the combat experienced commander who's qualified to tell which risks are worth taking.

General Ben-Nun, Israeli Air Force, 1984

Those who start in the company's mainline jobs, the making or selling parts of the business, are unlikely

to be subsequently fooled by the abstractions of planning, market research, or management systems as they are promoted. Moreover, their instincts for the business develop. They learn to manage not only by the numbers but also, and perhaps more importantly, by a real feel for the business. They have been there. Their instincts are good. [Emphasis added.]

Thomas J. Peters and Robert H. Waterman
In Search of Excellence, 1982

To this point we have concentrated on what doctrine *is not*, arguing that it can be neither exactly defined nor safely cut off from battle experience. Having done so, are we finally in a position to say something useful about what doctrine *might be*?

By making the abstract definition of roles and missions the touchstone of their thinking, U.S. airmen have turned the doctrinal enterprise into a sterile scholasticism too little related to the concrete activities of war itself. Presumably, then, what we need to do in the future is to tie doctrine more directly to combat experience.

How does combat experience provide a practical alternative to first trying to nail down in words exactly what doctrine *is*? Michael Polanyi, physical chemist turned philosopher, has argued that human beings have a capacity to know more than they can tell.³⁷ Skillful feats, like air combat maneuvering or manual dive bombing, illustrate this sort of tacit knowledge (or implicit understanding³⁸). Such acts are *tacit* (or *implicit*), according to Polanyi, because the dissection of a skill into its constituent parts is always incomplete. But skills also represent *knowledge* (or *understanding*) insofar as they can be mastered and reliably repeated on demand.

To be stressed is Polanyi's realization that if the constituents of a given skill cannot be exhaustively and explicitly specified, then each individual must discover for himself "the right feel" for any particular skill.³⁹ A striking illustration is provided by the George Air Force Base F-4 instructor pilot who, in the early 1970s, developed such a flair for dive bombing that he could turn off his gunsight and still, more often than not, drop the best bombs in the flight. Asked how he did it, he would reply: "I pickle when it feels

right."⁴⁰ If common experience about skillful feats is any guide, no other reply is possible (although one presumes that the pilot in question must have dropped quite a few bombs before he was able to function this well without the aid of a gunsight).

It may seem a long step from particular tactical skills like dive bombing to warfighting in general. In reality, however, the two have more in common than what first meets the eye. The stresses of actual war may not always test the bodily strength, intellect, and character of a high commander in precisely the same ways as they test those of a young pilot, but test them they do. And the nub of that test, as the World War II fighter ace Donald S. Gentile (19.83 victories air-to-air) so poignantly stated, is the life or death imperative to act. Air-to-air combat, Gentile recounted while still flying missions with the Eighth Air Force's 4th Fighter Group in 1944,

goes in a series of whooshes. There is no time to think. If you take time to think you will not have time to act. There are a number of things your mind is doing while you are fighting—seeing, measuring, guessing, remembering, adding up this and that and worrying about one thing and another and taking this into account and that into account and rejecting this notion and accepting that notion But while the fight is on, your mind feels empty . . . as if the flesh of it is sitting in your head, bunched up like muscle and quivering there.⁴¹

What is Gentile saying? For the most part, he is describing the implicit but interactive cross-referencing process by which combatants continually orient and reorient themselves in the unfolding circumstances of battle.⁴² Only his final sentence in the cited passage—where Gentile ostensibly says that in the heat of battle his mind feels empty—requires explanation. Those of us who have been exposed to combat would suggest that he really means something other than what his words literally say. If the mind is constantly seeing, measuring, guessing, and weighing this or that during battle, then it cannot be literally empty of activity. But

it may be empty in a less obvious sense: namely, that while directly engaged in fighting, combatants are seldom fully conscious of their mental processes. In other words, thinking during battle is mostly a matter of skilled responses so deeply internalized or nearly autonomous that the combatants themselves are no more than partially aware of all that they are doing.⁴³

The point is that in real war there is almost never enough time, unambiguous information, or relief from the dreadful pressures of combat to think though any situation in the step-by-step, fully conscious manner possible at home, in the office, or in the classroom. For better or worse, war compels combatants of every rank to lean heavily upon whatever *Fingerspitzengefuehl* (or implicit feel for battle) they may possess.⁴⁴ Yes, everyone who engages in combat strives to plan in advance as systematically as he can, to use every available scrap of information, and to leave as little to chance as possible. But despite one's best efforts, real war has a ruthless way of forcing combatants to respond first and foremost on the basis of their implicit appreciation for what is likely to work in specific combat situations.⁴⁵

A Warfighter's View of Doctrine

As warfighters, what can we ultimately say about what doctrine *is*? Clausewitz stated, early in *On War*, that theory can never fully define the general concept of friction.⁴⁶ But realizing that useful metaphors could be given, he variously characterized friction as (a) "the only concept that more or less corresponds to the factors that distinguish real war from war on paper," (b) "the force that makes the apparently easy [in war] so difficult," and (c) "the elements that coalesce to form the atmosphere of war."⁴⁷ Following Clausewitz's lead, we would insist that a formal definition of doctrine that explicitly captures all its particulars and nothing more cannot be given. But, we would likewise go on to characterize doctrine—

at least in the sense of offering a baseline metaphor—as *the implicit orientation with which a military culture collectively responds to the unfolding circumstances of war*.

What is this metaphor intended to convey? It implies first of all that doctrine can be an overriding determinant of combat outcomes. In *Attack and Die*, Grady McWhiney and Perry Jamieson have argued that in the first three years of the American Civil War, the Confederacy “simply bled itself to death . . . by taking the tactical offensive in nearly 70 percent of the major actions”—even though, by 1861, advances in infantry weapon technology had begun to give the upper hand to the defense.⁴⁸ While McWhiney and Jamieson undoubtedly rely overmuch on crude statistical comparisons, they are right to draw attention to the pivotal role of doctrinal orientation in the South’s eventual defeat. The plain fact seems to be that the Confederates were never able to transcend a tactical mindset that saw offensive action as the only honorable approach to war.

Second, doctrine-as-implicit-orientation highlights the tacit nature of the assumptions and beliefs by which combatants fail or succeed. Regardless of how much we do or do not write down in our doctrine manuals, the precepts that count most in the heat of battle are those that have become more or less second nature. This reality obviously places a heavy burden on everyone in military uniform to master the craft of warfighting. But if we are to go by the evidence, the shoulders of warriors and “operators” are precisely where this burden should lie. As one veteran Israeli pilot said after the June 1982 air campaign over Lebanon in response to American questions about how much doctrine the Israeli Air Force had written down, “Yes, we have books. But they are very thin.”⁴⁹ Or, to offer a more concrete metaphor, the doctrine that really wins or loses wars is the collection of internalized values, rules of thumb, and elemental images of war on which a military group instinctively relies in battle.

The foremost observation that we would make about our metaphorical characterizations of doctrine is that they do appear more likely to be useful to combatants than the abstract definitions of terms so typical of mainstream Air Force doctrine to date. After all, construed as the implicit orientation or collective instincts of battle-wise veterans, doctrine can be seen as a *working synthesis* of the *Fingerspitzengefuehl* of successful warfighters. And because the mature *Fingerspitzengefuehl* of a George Patton, a Heinz Guderian, or an Erich Hartmann has so often produced amazing battle results, doctrine then boils down to what is known to work where it counts—in combat.⁵⁰

Why might this view of doctrine work better than an approach grounded on definitional abstractions? Consider the sorts of insights that skilled practitioners of military art have distilled from battle experience in the past:

- “Survive first, kill bogies second.”⁵¹
- “The battle will never go as you planned it. Improvise. Surprise is your most important weapon. Risk, risk, risk.”⁵²
- Knowledge is important: efficiency even more so. But character and personality are the most important. Knowledge can easily fail and can, in fact, be the cause of failure. Not intelligence but character is the unfailing factor. Only character is reliable in tough situations, and . . . in combat.⁵³
- It is better to render a partly faulty decision at the right time than to ponder for hours over various changes in the situation and finally evolve a perfect decision, but too late for execution.⁵⁴
- Wars are only won by risking the impossible.⁵⁵
- Develop intuitive judgment and understanding for everything.⁵⁶
- Keep it simple, stupid!⁵⁷

To those skilled in war, these statements are concrete and easily understood. They reflect the face of battle as it is, not as pure theoreticians and force planners so often wish or as-

sume it to be. Above all else, they provide a clear basis for action. It is the down-to-earth, battle-tested *Fingerspitzengefühl* embodied in propositions like these that should be the warp and weave of Air Force doctrine.

This last thought suggests another observation regarding doctrine-as-implicit-orientation. The pressures of the annual Pentagon budget process neither excuse nor justify the historical concentration of Air Force doctrinal thought on abstract definitions. Admittedly, budgets cannot be ignored, and careful definitions may even have a certain utility vis-à-vis allocations within and between the various services. We would suggest, however, that for the most part the Air Force at large would be better advised to concentrate more on questions like: Does war remain fundamentally a contest between independent wills dominated by friction? For not only has there been ample-to-overwhelming evidence in favor of this essentially Clausewitzian view of war's nature for decades (if not centuries), but an implicit orientation that is shared, unifying, and easy to implement has also been one of the keys to overcoming friction.

FINALLY, however one elects to think about

basic air power doctrine, it must be firmly grounded on hard evidence. To view Air Force doctrine primarily in terms of abstract roles and missions requiring zealous protection tends to equate past success with historical validity. True, the United States and its allies won World War II; and after that war, American airmen won service autonomy. But neither of these victories can be said to have validated the Air Force's basic doctrine to any great degree. The unpleasant reality is that, beyond clearly foreseeing the future importance of air power at a time when most men did not, the majority of American air commanders, as late as the fall of 1943, "failed completely to grasp the essential meaning of air superiority," and every salient prewar belief of American air strategists "was either overthrown or drastically modified by the experience of war."⁵⁸ Our air doctrine, in short, has not always enjoyed the firmest basis in empirical fact. And if we hope to do better in the future, then we must never forget that the ultimate arbiter of doctrinal beliefs is whether they help us to prevail in the air. "Anything else," as Baron Manfred von Richthofen once said, "is absurd."⁵⁹

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Notes

1. Robert Frank Futrell, *Ideas, Concepts, Doctrine: A History of Basic Thinking in the United States Air Force, 1907-1964* (Maxwell AFB, Alabama: Air University Press, 1971), pp. 6-7.

2. Air Force Manual 1-1: *Basic Aerospace Doctrine of the United States Air Force* (Washington: Headquarters U.S. Air Force, 5 January 1984), pp. v, A-1, A-2, and A-4.

3. The Air Service Field Officers School that began at Langley Field, Virginia, in October 1920 changed its name to the Air Service Tactical School in 1922. In the wake of the 1926 Air Corps Act, the school became the Air Corps Tactical School, and in 1931 it moved to Maxwell Field outside Montgomery, Alabama. See I. B. Holley, Jr., *An Enduring Challenge: The Problem of Air Force Doctrine* (Colorado Springs: U.S. Air Force Academy, 1974), Harmon Memorial Lectures in Military History, Number Sixteen, pp. 3 and 15.

4. David MacIsaac, *Strategic Bombing in World War II: The Story of the United States Strategic Bombing Survey* (New York: Garland, 1976), p. 7; Haywood S. Hansell, Jr., *The Air Plan That Defeated Hitler* (Atlanta, Georgia: Higgins-McArthur/Longino and Porter, 1972), pp. 4, 8, and 75-76; Thomas A. Fabyanic, "The Development of Airpower between the Wars," video taped lecture to the Air Command and Staff College, Maxwell AFB, Alabama, 3 February 1983, transcription by Barry D. Watts, pp. 16-18.

5. Futrell, p. 5; also see Brigadier General Dale O. Smith, *U.S. Military Doctrine: A Study and Appraisal* (New York: Duell, Sloan, and Pearce, 1955), pp. 4-6.

6. Futrell, pp. 5 and 7.

7. I. B. Holley, Jr., "Concepts, Doctrines, Principles: Are You Sure You Understand These Terms?" *Air University Review*, July-August 1984, pp. 90-93.

8. The dialectical dialogues of Plato's earliest period are considered to include, among other works, the *Laches*, *Protagoras*, *Euthyphro*, and *Meno*. See Gilbert Ryle, "Plato," *The Encyclopedia of Philosophy*, edited by Paul Edwards (New York: Macmillan and the Free Press, 1967), Vol. 6, p. 319.

9. Plato, *Laches*, translated by Benjamin Jowett in *The Great Books of the Western World*, edited by Robert M. Hutchins (Chicago: Encyclopaedia Britannica, 1952), Vol. 7, p. 32.

10. Illustrative of the substantive difficulties that arise is the objection in the *Euthyphro* that to define piety as being what is loved by the gods merely gives an attribute of piety, not its essence. Plato, *Euthyphro*, in *Great Books*, p. 196.

11. At the end of the *Euthyphro*, for example, the most positive statement that the participants can make is that they "must begin again and ask, What is piety?" *Ibid.*, p. 198.

12. Georg Cantor, *Contributions to the Founding of the Theory*

of *Transfinite Numbers*, translated by Philip E. B. Jourdain (New York: Dover, 1955), p. 85.

13. Webster's Third New International Dictionary of the English Language: Unabridged, definition 44b, p. 2078.

14. Ibid., definition 6, and definition 5. Emphasis added.

15. In full, Russell's paradox goes as follows. "One notes that many sets do not contain themselves. Examples are the set of all books (which is not itself a book), the set of all primes less than ten, the set of all things which are not themselves sets, etc. We may call such sets *normal*. *Abnormal* sets are those sets which do contain themselves. Examples are the set of all sets, the set of all sets describable in fewer than 20 English words, the set of all sets which contain more than three members, etc. Now consider the set of all normal sets and ask whether it is normal or abnormal. If it is normal, then it doesn't contain itself, by definition of *normal*. However, if it doesn't contain itself, it does contain itself, since it is the set of all normal sets. If, on the other hand, it is abnormal, then it contains itself, by definition of *abnormal*. However, if it contains itself, it is excluded from itself, since it is the set of only normal sets. In short, we again have a contradiction." See Howard DeLong, *A Profile of Mathematical Logic* (Menlo Park, California: Addison-Wesley, 1970), p. 82.

16. Raziell Abelson, "Definition," *The Encyclopedia of Philosophy*, Vol. 2, p. 314.

17. There are at least two reasons why formulations of set theory that avoid the known paradoxes do not undercut Abelson's view that no general theory of definition exists.

First, even though formal axiomatizations of set theory, such as that associated with the work of Ernst Zermelo, Abraham Fraenkel, and Thoralf Skolem, equate the word "set" with the primitive variables (or terms) occurring in the Zermelo-Fraenkel-Skolem axioms, the mathematical system deduced from them is formally "independent of any meanings which may be associated with the primitive terms" employed in those axioms. See Howard Eves and Carroll V. Newson, *An Introduction to the Foundations and Fundamental Concepts of Mathematics*, rev. ed. (New York: Holt, Rinehart and Winston, 1965), p. 117.

Second, the fact that two of the Zermelo-Fraenkel-Skolem axioms (the axiom of choice and the continuum hypothesis) are now known to be independent of the others demonstrates "the intuitive incompleteness of the standard axioms of set theory—incompleteness to a degree hardly expected. To a certain extent the situation is comparable to that in geometry after the independence of the parallel postulate was established. We now have many geometries and presumably we may expect many set theories." See Patrick Suppes, *Axiomatic Set Theory*, rev. ed. (New York: Dover, 1972), pp. 252-53. In other words, because alternative set theories would, like non-Euclidean geometries, be based on embracing at least one axiom that is logically inconsistent with the "standard" ones, existing means of avoiding the known set-theoretic paradoxes fail to furnish a unique understanding of what a set is.

18. The definitional difficulties that have been encountered by various NATO agencies and groups dealing with BAI have led the Tactical Air Command (TAC) staff recently to recommend that BAI be subsumed into air interdiction. TAC's view is that BAI and AI are so functionally similar that they would be best directed and controlled as a single "mission area." We would note, however, that working definitions of BAI adequate for practical purposes are less troublesome. In the Israeli Air Force (IAF), for example, a sortie or mission either participates in the ground battle or not. If it does participate in the ground battle, then the sortie or mission is either coordinated (i.e., targets are generated by the ground forces or else decided on jointly) or not coordinated (i.e., targets are specified by the IAF alone and do not require army support, input, or control).

19. Air Force Manual 1-1, *Functions and Basic Doctrine of the United States Air Force* (Washington: Headquarters U.S. Air Force, 14 February 1979), p. vii; Air Force Manual 1-1, *Basic Aerospace Doctrine of the United States Air Force*, pp. v and vii.

20. Marshal of the Soviet Union Nikolay Vasil'yevich Ogarkov,

Always in Readiness to Defend the Homeland, translated by Foreign Broadcast Information Service (JPRS L/10412) (Moscow: Voenizdat, 1982), p. 41. This characterization of Soviet military doctrine was revived in the 1960s and can be traced back to Mikhail V. Frunze. See, for example, A. A. Grechko, *The Armed Forces of the Soviet Union*, translated by Yuri Sviridov (Moscow: Progress, 1977), p. 270; V. D. Sokolovskiy, *Soviet Military Strategy*, edited and translated by Harriet Fast Scott (New York: Crane, Russak and Company, 1968), pp. 38-40; and *The Soviet Art of War: Doctrine, Strategy, and Tactics*, edited by Harriet Fast Scott and William F. Scott (Boulder, Colorado: Westview, 1982), pp. 27-30.

21. Stephen M. Meyer, *Soviet Theater Nuclear Forces (Part I: Development of Doctrine and Objectives)*, Adelphi Papers Number 187 (London: International Institute for Strategic Studies, Winter 1983/4), pp. 3-5; John Hemsley, *Soviet Troop Control: The Role of Command Technology in the Soviet Military System* (New York: Brassey's, 1982), p. 261; Harriet Fast Scott and William F. Scott, pp. 92-93 and 140.

22. Holley, "Concepts, Doctrines, Principles," p. 90.

23. Hansell, p. 15.

24. Fabyanic, pp. 11 and 16.

25. Williamson Murray, *Strategy for Defeat: The Luftwaffe 1933-1945* (Maxwell Air Force Base, Alabama: Air University Press, 1983), p. 170.

26. Roger A. Freeman with Alan Crouchman and Vic Maslen, *Mighty Eighth War Diary* (London: Jane's, 1981), pp. 123-26.

27. Alfred B. Ferguson, "POINTBLANK" in *The Army Air Forces in World War II*, edited by Wesley F. Craven and James L. Cate, Vol. 2, *Europe: TORCH to POINTBLANK, August 1942 to December 1943* (Chicago: University of Chicago Press, 1949), p. 705.

28. Murray, Tables XXXIII and XXXIV on pp. 175-76; Freeman, pp. 123-26.

29. Holley, *An Enduring Challenge*, p. 5.

30. William R. Emerson, *OPERATION POINTBLANK: A Tale of Bombers and Fighters* (Colorado Springs: U.S. Air Force Academy, 1962), Harmon Memorial Lectures in Military History, Number Four, p. 24. During World War II, Emerson flew a combat tour in the P-47 in the Mediterranean theater of operations.

31. Fabyanic, p. 2. The statements cited were taken from Air Corps Tactical School documents.

32. Holley, *An Enduring Challenge*, p. 7.

33. Fabyanic, p. 13.

34. Von Clausewitz, pp. 139 and 149. As Williamson Murray has recently observed, the unpardonable aspect of Eighth Air Force's staggering bomber losses in October 1943 stemmed from the refusal of American airmen to alter their prewar doctrine in the face of battle experience. Thus, while the sixty bombers lost on the Schweinfurt/Regensburg raid of 17 August 1943 can be defended, "the second great disaster over Schweinfurt in October 1943 (where another sixty bombers were lost) raises the most serious doubts about the willingness of Eighth's leadership to adapt doctrine to reality." See Williamson Murray, "A Tale of Two Doctrines: The Luftwaffe's 'Conduct of the Air War' and the USAF's Manual 1-1," *Journal of Strategic Studies*, December 1983, p. 85.

35. Elmer Bendiner, who flew as a B-17 navigator on both the 17 August and 14 October 1943 missions to Schweinfurt, has concluded that on both occasions Eighth's crews "were sent on a hazardous mission to destroy in a single day an objective that was vulnerable only to repeated assaults for which we [Eighth's bomber groups] had not the strength. Those objectives could not wait for the arrival of more bombers, of the promised Mustangs, of belly tanks and wing tanks, because we had to dramatize the importance of air power in the European Theater for the benefit of the public and the Navy." Emphasis added. See Elmer Bendiner, *The Fall of Fortresses: A Personal Account of the Most Daring—and Deadly—American Air Battles of World War II* (New York: G. P. Putnam's Son, 1980), p. 234. Eaker, as Bendiner notes, largely confirmed this assessment in 1977 during an interview with Albert Speer. See Ira C. Eaker and Arthur G. B. Metcalf, "Conversations with Albert

Speer," *Air Force Magazine*, April 1977, p. 56.

36. German Field Service Regulations, *Truppenfuehrung (Troop Leading)*, Part I, translated by U.S. Army, Report No. 14,507, 18 March 1936, p. 1. For a fuller discussion of traditional German versus recent American air doctrine, see Murray, "A Tale of Two Doctrines."

37. Michael Polanyi, *Knowing and Being: Essays by Michael Polanyi*, edited by Marjorie Grene (Chicago: University of Chicago Press, 1969), p. 133.

38. John R. Boyd, *Organic Design for Command and Control* (Washington: Xerox reproduction of briefing slides, March 1984), p. 8.

39. Polanyi, p. 126.

40. The pilot who could "bomb everybody's eyes out" with his sight reticle turned off was Bobby G. Williams. When then-Lieutenant James Hale encountered him in 1971 at George Air Force Base, California, Williams was a major instructing in the F-4 replacement training unit. Williams's story is not unique. After the Korean War, Captain Cal Davey, while flying F-86s at Nellis AFB, Nevada, developed the same kind of eye-watering proficiency at dive bombing. Davey too explained his talent in terms of feel, often briefing other pilots that he simply pickled "when that guy taps me on the back of the shoulder."

41. Captain Don S. Gentile, as told to Ira Wolfert, *One-Man Air Force* (New York: American Book-Stratford Press, 1944), pp. 8-9.

42. Boyd, p. 15. "Orientation," Boyd says, "is an interactive process of many-sided implicit cross-referencing projections, empathies, correlations, and rejections that is shaped by and shapes the interplay of genetic heritage, cultural tradition, previous experiences, and unfolding circumstances."

43. As G. M. Stratton's work in the 1890s with vision-inverting glasses revealed, even perceptual feats as seemingly transparent as vision involve extensive information processing that is not accessible to the consciousness of the perceiver. See Polanyi, pp. 198-99.

More generally, large organizations and higher organisms exist effectively because of their ability to manage complexity through such techniques as delegating various subtasks to near-autonomous subsystems that are allowed "to go their own way and work on their own problems most of the time." See Paul K. Davis, "Rand's Experience in Applying Artificial Intelligence Techniques to Strategic-Level Military-Political War Gaming," Rand Corporation Paper P-6977, April 1984, p. 11.

44. *Fingerspitzengefuehl* literally means fingertip feel but is more often translated as instinct, intuition, or flair. Like many German figures of speech, it tends to have metaphorical connotations that are difficult to capture in literal English translations.

45. Boyd, pp. 24-25 and 28.

46. Clausewitz, p. 120.

47. Clausewitz, pp. 119, 121, and 122.

48. Grady McWhiney and Perry D. Jamieson, *Attack and Die: Civil War Military Tactics and the Southern Heritage* (Tuscaloosa:

University of Alabama Press, 1982), pp. 7, 40, 57, and 146.

49. The American to whom this reply was addressed was Major Hale, who was part of an Air Force team that visited Israel in May 1983.

50. The military achievements of General Patton are fairly well known to American readers. *Generaloberst* Heinz Wilhelm Guderian created the *Panzertruppe* that proved so pivotal to Germany's swift conquest of Poland and France in 1939 and 1940. See Kenneth Macksey, *Guderian: Creator of the Blitzkrieg* (New York: Stein and Day, 1976), p. 63. Erich Hartmann is credited with 352 aerial victories on the eastern front during World War II, including seven against American-flown P-51s. See Edward H. Sims, *The Aces Talk*, formerly *Fighter Tactics and Strategy 1914-1970* (New York: Ballantine, 1972), p. 232.

51. Lieutenant Colonel Watts first encountered the maxim "Survive first, kill bogies second" at the Navy's Topgun Fighter Weapons School in 1975. The occasion was a syllabus lecture on "two-versus-many" by Alex Rucker.

52. S. L. A. Marshall, *Swift Sword: The Historical Record of Israel's Victory, June 1967* (New York: American Heritage, 1967), p. 133.

53. *General die Infanterie* Guenther Blumentritt, as quoted by C. A. Leader, "The Kriegsakademie: Synthesizer of Clausewitzian Theory and Practice," unpublished paper, 30 July 1982, p. 42.

54. Captain Albert C. Wedemeyer, *The German General Staff School*, Report Number 15,999 from the U.S. Military Attaché, Berlin, 11 July 1938, National Archives Record Group 407, p. 139.

55. George S. Patton, Jr., quoted in Martin Blumenson, *The Patton Papers: 1940-1945* (Boston: Houghton Mifflin, 1974), p. 86.

56. Miyamoto Musashi, *A Book of Five Rings: The Classic Guide to Strategy*, translated by Victor Harris (Woodstock, New York: Overlook Press, 1974), p. 49. Musashi, known to his fellow Japanese as *Kensei* (Sword Saint), was a Kendo master who lived from 1584 to 1645.

57. Thomas J. Peters and Robert H. Waterman, Jr., *In Search of Excellence: Lessons from America's Best-Run Companies* (New York: Warner Books, 1982), pp. 63-67. As Peters and Waterman note, "Keep it simple, stupid!" is rooted in the psychological fact that humans are not good at processing large streams of new data and information; instead, they "reason with simple decision rules, which is a fancy way of saying that, in this complex world, they trust their gut."

58. Emerson, p. 40.

59. Manfred Freiherr von Richthofen, translated by Peter Kilduff, *The Red Baron* (Garden City, New York: Doubleday, 1969), p. 116. The quotation is part of the longer quotation: "The fighter pilots should have an allotted area to cruise around in as it suits them, but when they see an opponent they must attack and shoot him down. Anything else is absurd The mastery of the air in war is won through nothing other than battle, that is, shooting down the enemy."

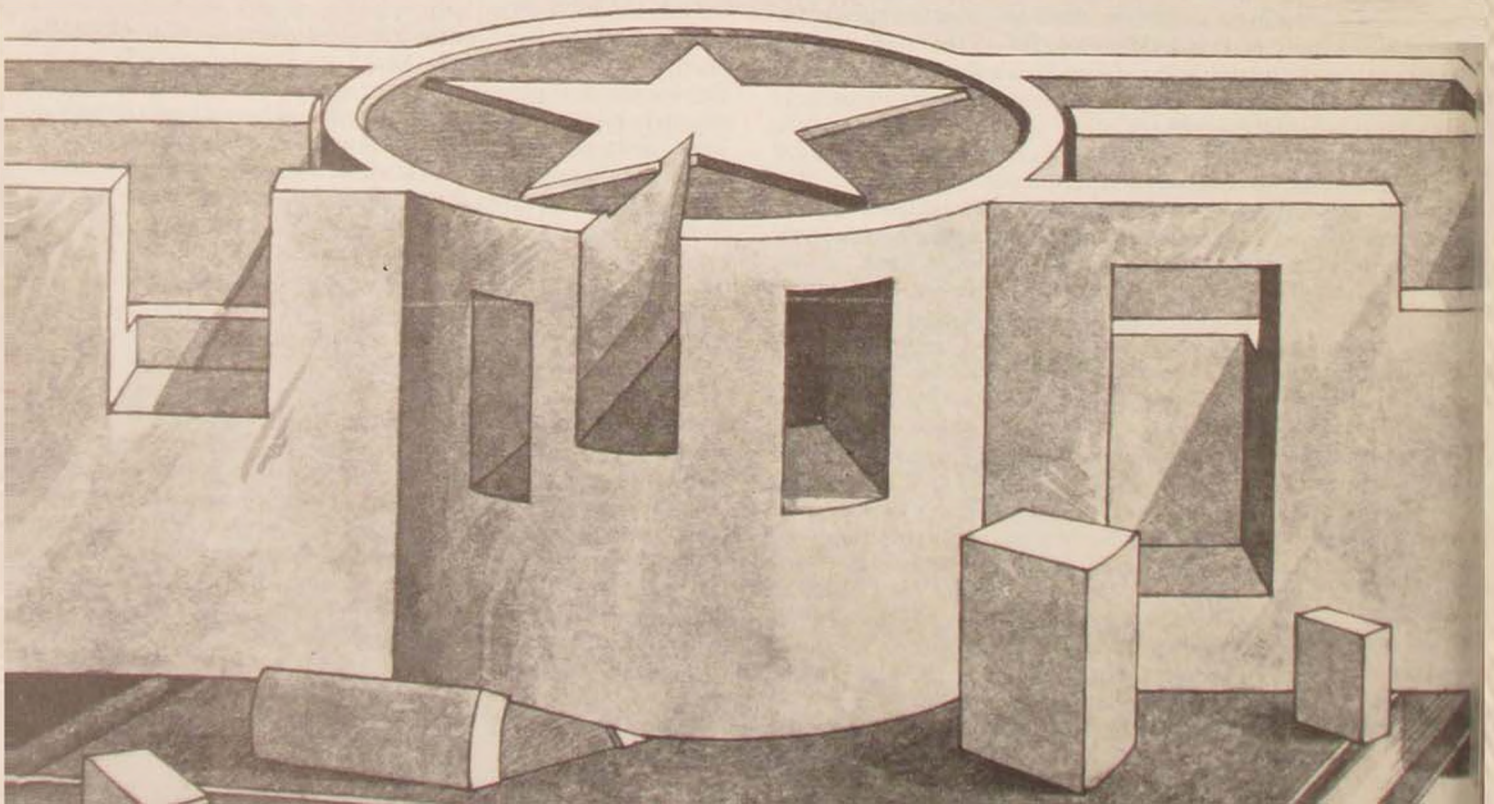
USAF DOCTRINE: AN ENDURING CHALLENGE

COLONEL CLIFFORD R. KRIEGER

THIS year the U.S. Air Force published two very important documents: Air Force Manual 1-1, *Basic Aerospace Doctrine of the United States Air Force*,¹ and a reissue of *The Condensed Analysis of Ninth Air Force Operations in the European Theater of Operations* (hereafter referred to as the *Condensed Analysis*).² Study of these two documents by professional Air Force officers should both confirm their understanding of air power doctrine and lead to a better comprehension of how to employ air power.

The New Air Force Manual 1-1

In four short chapters, the new Air Force Manual (AFM) 1-1 addresses the employment of military forces, the specific employment of aerospace forces, the missions and specialized tasks of the Air Force, and the preparation of aerospace forces for war (organizing, training, equipping, and sustaining). Going beyond describing the classic missions and specialized tasks of air forces and their organization, training, equipment, and sustainment, this edition



discusses the employment of aerospace forces as part of a unified military organization to win in war. This emphasis on aerospace power as part of a holistic approach to war represents a new level of conceptualization not previously achieved. It also presents an overall concept for the proper employment of air power, calling for the air commander to have a broad plan of employment and encompassing ideas delineated in World War II's FM 100-20.³ The commander's broad plan of employment provides a key to air power often missing in recent discussions. Our AFM 1-1 is, in many ways, the equivalent of the Army's FM 100-1, *The Army*⁴ and the Navy's NWP-1, *Strategic Concepts for the U.S. Navy (Rev A)*.⁵ However, the Air Force's AFM 1-1 delves deeper into warfighting than either the Army's FM 100-1 or the Navy's NWP-1.

The new edition of AFM 1-1, while covering the same ground as the previous edition (and more), takes a different approach. The manual begins with a chapter that emphasizes both the relationship of the military to the nation and the interrelationship among the military services. Aerospace forces are seen as having certain intrinsic capabilities. To exploit these capabilities fully, aerospace forces must be integrated and coordinated with land and naval forces. Thus, unity of command, the appointment of a single commander to achieve unity of effort in carrying out an assigned task, is critically important.

The second chapter examines the employment of aerospace forces. An important addition here is the concept of a broad plan of employment and, in particular, recognition of the importance of employing aerospace power as an indivisible entity, based on objectives, threats, and opportunities. The chapter emphasizes that the commander has a broad plan of employment and conducts simultaneous strategic and tactical actions utilizing all available forces. The importance of employing both offensive and defensive action, as well as employing aerospace operations for psychologi-

cal impact, is amply discussed. The basics of warfighting are covered in this chapter: that is, not only the principles of war (which now include both logistics and cohesion) but such important fundamentals as the need to gain control of the aerospace environment and to attack the enemy's war-fighting potential, to develop a coherent pattern for employing forces, and to take advantage of the wide array of unique capabilities that aerospace forces possess.

The third chapter focuses on missions and specialized tasks of aerospace forces. The long discussion of DOD Directive 5100.1, which addresses functions of the Air Force, is much reduced from the previous edition. (The material in the DOD directive is covered elsewhere.)⁶ Rather than providing only a list of missions and a description of each, as in the previous AFM 1-1, the new manual covers each mission in terms of how it contributes to the achievement of the air component commander's objectives. For example, the discussion of air interdiction (AI), recognizing the fact that AI is normally flown "as part of a systematic and persistent campaign," stresses the need for the air component commander to consult with the surface force commanders in developing an AI campaign.⁷

The manual no longer includes space operations as an Air Force mission. Discussion of these operations was dropped based on the realization, expressed in AFM 1-6, *Military Space Doctrine*, that space is a place wherein the Air Force simply performs its classic missions in new and improved ways.⁸ On the other hand, aerospace maritime operations was added as a mission in recognition of the fact that maritime operations are "made unique primarily by the character of its objectives, the threat, and the forces involved."⁹ In addition, the specialized tasks of the Air Force have been updated and expanded in description.

The fourth chapter deals with organizing, training, equipping, and sustaining aerospace forces. Increased emphasis is placed on the ser-

vices as providers of forces, while the unified and specified commanders and their functional (land, naval, and air) component commanders are viewed as the employers of forces. This distinction is critical to the proper employment of military power and of aerospace power in particular. Confusing the two responsibilities results in disrupting the effective functional employment of forces in order to maintain service command lines.

Finally, the historical discussion of air and aerospace doctrine that was an integral part of the previous manual has been moved to Annex A, and the bibliography (Annex B) has been updated. The bibliography now covers U.S. involvement in Vietnam, including books by Bernard B. Fall and Leslie H. Gelb.¹⁰ It also includes important works on World War II, such as those of Marshal of the Royal Air Force Lord Tedder and coauthors Wesley F. Craven and James L. Cate.¹¹ Some important books are still missing, such as Colonel Harry G. Summers's *On Strategy*, which examines our involvement in Vietnam from a Clausewitzian perspective.¹²

Notwithstanding the improvements in AFM 1-1, the manual is not complete in and of itself. It is a slender volume of only forty-seven pages, and it must be read within the context of other Air Force manuals on basic and operational doctrine (one- and two-series manuals) and against the backdrop of the history of air power. Including the historical background of air power in AFM 1-1 was not possible for two reasons. First, it would have run the volume to approximately 250 pages. Second, the detailed historical basis for its concepts is not of much interest to a large number of airmen, who are looking for the distilled doctrine. This exclusion of the historical background for Air Force doctrine should not be considered as a weakness in the product. Ours is a technical business, and many in our service must devote themselves almost exclusively to their areas of specialization, which are as important as doctrine in conducting successful air warfare.

While historical experience and modern capabilities must be woven together to formulate doctrine, distilled doctrine helps those involved in the technical end keep a focus on how we will fight.

The Reissued *Condensed Analysis*

Because AFM 1-1 does not include all of the historical basis for aerospace doctrine, the recent reissuing of the *Condensed Analysis* by the Air Force Office of History is an event worth noting. The *Condensed Analysis* discusses the employment of U.S. air power in France and Germany during 1944 and 1945. By coincidence, it is being published near the fortieth anniversary of the D-day invasion, the opening battle for Ninth Air Force's greatest campaigns. The historical account does not exist in isolation, however, but is linked to the early lessons of World War II—in particular, to the lessons learned by the Allies in North Africa. The historical chapters do not represent the definitive history of air operations in the European Theater, but they do present the official opinions of the American airmen who fought and helped to win the war there.

Printed as part of the Air Force Office of History's Project Warrior Series, this reissue is not expected to be a runaway best seller. However, it should find a receptive audience among Air Force officers attempting to learn more about how air power alters land (and naval) operations in war and why our doctrine is what it is. The reprinting of the *Condensed Analysis* is a faithful reproduction of the original issue, even to the very detailed maps and organizational charts that fold out of the book. It is not a popular history: it does not describe heroic events or technical points of particular aircraft. Instead, the book is an examination of World War II warfighting through the eyes of the commanders and staffs at the air component commander level and just below. This is a view often neglected, but one that we must study and

understand if we are to be successful in a future war.

An important feature of the *Condensed Analysis* is its discussion of the large-scale, effective cooperation between air and land forces. It was in the campaigns across France and Germany that U.S. and British air forces were able to support their land forces effectively on a massive scale. Their accomplishments, while limited by the aircraft and ordnance of the day, were a major factor in helping Allied land forces overcome German resistance.

The book contains fifty pages of conclusions and recommendations. Especially interesting to today's operations personnel are those related to the issue of control of air power. Emerging clearly in these pages is the rationale supporting today's Air Force concept of centralized control and decentralized execution, of the air war under the command of a single air component commander. Also of interest to operations personnel are a conclusion and recommendation concerning the training of replacement aircrews: noting that tactics in the theater were often ahead of what was being taught in Training Command, the book contributors recommend proper liaison between the groups involved, plus an in-theater "top-off" course. Similarly, comments about the Tactical Air Command-Army team make important, relevant points concerning collocation, round-the-clock operations, joint planning, and exchange of personnel that still apply today.

Other conclusions and recommendations are of interest to Air Force logisticians. Although the Allies could not have won World War II without the excellent work of the logisticians, there were some problems, particularly as a result of a less than adequate understanding between combat and support elements. As the *Condensed Analysis* puts it: "Service and combat commanders were, in general, not fully acquainted with one another's specific mission and functions."¹³

The *Condensed Analysis* even contains some

recommendations in the public affairs area. For example:

It is recommended that the air force policy on the availability of information to the PRO [public relations officer] section be as liberal as possible without compromising the security of planning or disposition of forces. It is further recommended that the PRO or his delegated representative be required to attend such operational meetings as are necessary to enable him to maintain a continuous picture of the immediate situation and future operations plans to the same extent as a wing commander or group commander.¹⁴

In good wings and groups today, the above practice is followed day in and day out.

This reissued version of the *Condensed Analysis*, along with other publications being reissued or updated by Air Force organizations, should be read by anyone hoping to understand the doctrine of the U.S. Air Force today. Among the important publications are two works by Dr. Robert Frank Futrell: *The United States Air Force in Korea, 1950-1953* (a reissue) and *Ideas, Concepts, Doctrine: A History of Basic Thinking in the United States Air Force, 1907-1964* (an updated revision).¹⁵ Dr. Michael Gorn and Dr. Charles J. Gross, two air power historians, have referred to the first of these studies as perhaps the best history written on air power in the Korean War, while naming the latter book as the best official history of the development of the U.S. Air Force.¹⁶ Certainly, both books merit our attention, in particular because they consider the problems of developing and employing air power not only at the tactical level but at the strategic and operational levels of war as well.

Air Power History and Lessons Learned

Certain threads run through the history of air power. Thus, someone reading the wartime diary of RAF Wing Commander Maurice Baring (who served as principal staff officer to General Hugh Trenchard, combat leader of the Royal Air Force in France during World War I)

would notice the same general categories of Air Force missions that we list today.¹⁷ Reconnaissance and surveillance, counterair, close air support, air interdiction, and strategic offensive and defensive missions were all conducted in World War I. In fact, it was the importance of the Royal Flying Corps mission of strategic defense, in opposition to a German strategic air offense, that led Jan Christiaan Smuts, a member of the Imperial War Cabinet and head of a parliamentary commission on home defense, to recommend a separate and coequal air force for Great Britain. All of the missions and specialized tasks of today can be found in World War II also, including the use of space as a combat environment (i.e., the German employment of V-2 strategic missiles).

In history we can also find some of the arguments that continue today. For example, some who read the most recent U.S. Army FM 100-5, *Operations*, believe that the manual says that air power should be made available to the corps commander for *his* synchronization as a part of *his* battle.¹⁸ This matter is a key issue for officers in all of the services, suggesting a tension between responsive support to individual land and naval force units and the need to employ air forces effectively to meet the overall needs of the theater CINC. In the past, efforts to meet the needs of every unit have resulted in such fragmentation of the air effort (i.e., breaking of air assets into penny packets) that air actions were not effective and our aircraft were, in fact, vulnerable to attack and destruction themselves. Only as professional airmen understand both their doctrine and their history will they be able to handle the tensions properly and make the best use of limited air assets.

Lessons learned in both our distant and our recent past are reflected in our new AFM 1-1. One of the first points that the manual makes is that it is of paramount importance to have the support of the American people when employing U.S. Armed Forces and committing them to a war. This is a lesson learned in our early history and relearned, at great expense, during

our involvement in Vietnam. Agreement among, and support from, three distinct groups is required to sustain a successful military policy: the government, the people, and the military. In Vietnam, enemy leaders realized that the American people were deeply divided by the war, and they played upon this division in their war effort. Additionally, it has been said that terrorism was used to undermine congressional support for our policy in Lebanon.

Another of the key points in the first chapter of the new AFM 1-1 is the importance of employing the military forces of the United States with the various services working as coequal members of an interdependent team. No one member of that team can win the war by itself; rather, all must work together. One of the lessons learned in World War II was that our military forces must be employed as an interdependent team of land, naval, and air forces commanded by one commander. This is a lesson that has been often forgotten in military action since 1945. Because of its speed, range, and flexibility, aerospace power in particular (more than land and naval power) must be employed as part of a unified command if it is to achieve its full effectiveness. This principle was not always followed in Korea or in Vietnam. It is a point often missed in many popular and acclaimed histories of World War II. For instance, Russell F. Weigley's *Eisenhower's Lieutenants*, despite the title, fails to address the majority of Eisenhower's lieutenants.¹⁹ Weigley takes the complex combined command structure of the Allies and slices it both horizontally and vertically. With one cut, he separates the land and air wars; with the other, he separates the British and American efforts. However, these cuts are not clean: although Dr. Weigley attempts to push the air effort and British participation into the background, both of these contributions had major effects on the American ground effort in France and Germany.

The concept of a coequal, interdependent relationship among air, land, and naval forces was a lesson learned in the Mediterranean

Theater during World War II. In a theater where land and naval forces had equally important but competing demands for air power, the proper control and employment of that air power had to be worked out. The solution was centralized control of air power under a coequal air component commander. Although it was later ignored, this solution was initially applied in Europe also, as the *Condensed Analysis* describes:

In the campaign in western Europe, where the precision teamwork of the Allied air, ground, and naval forces accomplished battle miracles, the basic military conception that air, land, and sea power are coequal and interdependent was confirmed beyond all reasonable doubt. Interdependence being both strategic and tactical, any arrangement of our armed forces which might prejudice the equality of the three arms would similarly prejudice our success in war.²⁰

Based on this idea, the *Condensed Analysis* calls for coequal component commanders under a single supreme commander.

There existed a need at theater level for separate, coequal air and ground headquarters, which could closely coordinate their operations but remain independently responsible to the theater commander or the Supreme Commander, as the case might be.

If such operationally coordinated but independent air and ground theater headquarters had been maintained in the ETO [European Theater of Operations], the resultant gain in flexibility of decision and promptness of action by the theater level or air command would have materially aided the Ninth Air Force in the execution of its administrative and operational commitments.²¹

In both the Korean and Vietnamese wars, we had to relearn these lessons. In Korea, we fought with three separate air forces for a major part of the war. Because of good will, good luck, and air superiority, we did not have any major problems. In Vietnam, not only was control of air power divided between the Vietnamese Air Force and the U.S. forces (Air Force, Navy, and Marine Corps), but the U.S. Air Force itself was divided between Vietnamese-based air and Thailand-based fighter air and

Strategic Air Command air. Thus, there were six different air forces fighting in Vietnam. Even among U.S. forces, there were not just three components for the theater commander to coordinate but a number of disparate commands, each engaged in its own war. If the air war had started to go against us, this arrangement would have caused us major difficulties.

The problem is further complicated when the theater commander believes that he is in a position to act as one of the component commanders. This happened in the early days of the Korean War when General Douglas MacArthur elected to run the land war from his own headquarters. Only later, when General Mathew Bunker Ridgway became the United Nations Commander, was a separate land component organized. Writing about the responsibilities of command, Lieutenant General John H. Cushman, USA (Ret), says: "The primary interest of each such [senior] commander is, and must be, his mission."²² He then states:

The above proposition is of surpassing truth for the senior *multiservice/multinational* commander, who as will be addressed later, must use to its fullest the moral authority which stems from his complete mission orientation. The proposition however becomes difficult to assess when a multiservice or multinational commander is at the same time the commander of a single-Service or national command (known as "double hatting"). In peacetime, single-Service or national concerns may take up most of the commander's attention, to the detriment of his multiservice/multinational mission.²³

Today, there is dual hatting in several locations. In each case, it could be detrimental to our war-fighting capability. One area with dual hatting is Korea, where the senior U.S. commander is the Commander, Combined Forces Command (CFC), the land component commander, and the U.S. theater commander. This is the same arrangement that existed during the beginning days of the Korean War. In Korea today, the problem is complicated by the lack of coequal components: the current peacetime air component commander is a U.S. Air

Force three-star general (dual-hatted as Chief of Staff, CFC), while his land component commander equivalent is a U.S. Army four-star general. Military services being what they are, rank speaks—especially when previous assignments have not built up a bond of friendship and understanding. The *Condensed Analysis* refers to this specific issue in one of its recommendations, “Comparative Rank—Air Forces and Ground Forces,” stating:

The air force and its components were at a disadvantage in the European Theater of Operations, because the commanders of air components were of lower rank than the commanders of their associated ground components. Three of the four tactical air commands were commanded (originally) by brigadier generals, while their three associated armies were commanded by lieutenant generals. This disparity extended throughout the TAC-Army staffs as well. Frequently air commanders and their staffs were required to deal with ground officers two grades higher but occupying comparable command and staff positions. This is not intended to imply that air-ground relations were not generally very amiable or that problems were not equitably worked out. However, differences in grade imposed considerable disadvantages on air components dealing with the ground forces.²⁴

The situation in NATO today is similar to that in Korea. The opposite situation exists in Alaska, where the theater commander is also the air component commander and outranks the land component commander by one or two grades. The issue of how many flag-rank officers the military should have is one often raised by those seeking to keep down costs or to return to the grade ratios of earlier years.²⁵ What is not often recognized is the danger of too much emphasis on economy and not enough on the effectiveness of one’s command structure.

Even a casual reading shows that certain threads run through air power history. For professional Air Force officers, the problem is the lack of thorough histories that will allow us to learn more about those threads. Increased knowledge would translate into increased fighting effectiveness should war come. Gorn and Gross, in their previously cited article, state:

“Despite its enormous importance and popularity, military aviation has largely been ignored by most American historians.”²⁶ The historical basis for study by higher-level commanders and their staffs is sadly deficient. Further, much of what is written as military or aviation history fails to examine the seam between air and land forces. Much writing is service-oriented, examining only the merits of one service. Most of us lack the academic credentials and the available free time to correct this situation, but we must be aware of it when we read history. We must constantly read with a critical eye—to avoid learning the wrong lesson. But we must continue to read.

Doctrinal Development: A Continuous Process

Air Force doctrine aims to integrate the lessons of air power history with ideas about how to employ the advances in technology not yet tried in battle. We study history to develop a context for doctrine development, we explore the capabilities of new technology, we conduct exercises, and we evaluate the way our units perform. What we learn from these activities must feed into our doctrinal development.

Since there is no *best* doctrine (only a *better* one), Air Force doctrine will never be complete or finished. Even though a new AFM 1-1 is on the street, we still have work to do. Some questions of interest to all of us remain unaddressed or unresolved. In a recent article in *Air Force Magazine*, General Bennie L. Davis stated that we should begin to think in terms of indivisible air power (the same idea is contained in the new AFM 1-1 statement that air power must be employed as an indivisible entity).²⁷ This is an area where our understanding of our doctrine must be refined. Another broad issue for airmen to examine is theater air warfare. For example, we must consider the problem of apportioning air effort in order to meet the competing requirements of land and naval commanders. In some theaters, such as the Central

Region of Allied Command Europe, maritime support requirements are quite minor. However, in the Northern and Southern Regions, demands for maritime support could be substantial, and the issue may well loom large for the theater CINC and the air component commander. As airmen, we need to be thinking through these and other issues not yet resolved.

Professional Air Force officers who hope to command operational units or expect to be on operational staffs should be particularly aware of such matters and should be thinking about the directions that our doctrinal development must take. Air Force officers should not expect Headquarters USAF and major command personnel to do their thinking for them. Neither we on the Air Staff nor we in the Air Force as a whole have a *final* doctrine—one that we can simply memorize and then apply without judgment and modification. Continuously, commanders and staffs work on issues that could have far-reaching impact upon how we fight and whether or not we win the next war.

One such issue is whether aerospace power will truly be employed as an entity (as "indivisible air power," in the words of General Davis). To some extent, this issue revolves around the authority of the theater air component commander. If, for instance, SAC bombers are introduced into a theater where responsibility for integration into the overall air campaign is given to someone besides the air component commander, that basic unifying concept of aerospace power as an indivisible entity will be lost. If parceling out air power becomes commonplace, it will allow an enemy to defeat our air forces in detail.

Another such issue concerns Marine tactical aviation. The U.S. Marine Corps has worked out and articulated its doctrine for the employment of the Marine Air Ground Task Force (MAGTF) as a uniservice force in support of naval objectives. The MAGTF can make a major contribution operating on its own to protect the flank of a major land operation. The Air Force accepts and supports the em-

ployment of the MAGTF in such a manner. Where the Air Force differs with the Marine Corps is on the matter of how to handle Marine Tac Air in the unusual circumstance where Marines are fighting as one of several divisions, on line, in sustained operations ashore. This issue has been around since the end of World War II and is often discussed, but resolution is not in sight. Air Force officers must know and understand both the Marine Corps and the Air Force positions on employment of the MAGTF, so that they can act knowledgeably and responsibly when in a position to deal with this question.

Another doctrinal debate, which has surfaced only recently, is about the term *operational level of war*—a relatively new term in this country. Up until now, it has been used to describe Army operations and, in fact, has been adopted by the U.S. Army. However, there is much confusion as to what the term means. As used in FM 100-5, it appears to represent a level of war between the theater strategic and the tactical levels. Thus, division operations and below would be considered tactical; corps, field army, and army group would represent the operational level of war; and actions guided by the theater commander and land component commander would represent the theater strategic level. This view is not universally accepted. Some would argue that there is no strategic level within a theater.²⁸ In another view, military analyst Edward N. Luttwak states that the operational level is optional and is used when a military force is numerically outnumbered. He sees the operational level as a creative action that involves taking risks in order to win. He suggests that within the European Theater in World War II the Allies operated only at the strategic and tactical levels. However, he would credit General MacArthur with fighting at all three levels of war in the Southwest Pacific, as well as in Korea.²⁹ We in the Air Force need to ask ourselves if the operational level of war has any meaning for us. If it does, we need to begin thinking about it and

incorporating it in our doctrine.

An additional area where doctrine needs more attention is the space environment. The present AFM 1-6, which is currently under revision, states that all air force missions can be performed or supported from space.³⁰ It also notes that government policies preclude the conduct of some air force missions in space. Furthermore, other missions may not even be considered in the context of space, since, at this time, they can be performed effectively without going into space. An example is close air support (although even this type of mission may receive some support from space, such as that provided by space-based navigation or communications systems).

EFFECTIVE doctrine should be neither as solid as granite nor as shifting as the sands of the

desert. Rather, it must be reflective of past lessons learned, yet open to refinement and growth. Professional Air Force officers throughout our service should be contributing to the process of refinement and growth through their study, discussion, and writing. The ideas of Air Force officers should be surfacing in discussions at work, around the bar, and in the pages of our professional journals. Furthermore, the Hq Air Force Doctrine and Concepts Division welcomes any suggestions.³¹ Not every new idea is adopted, but each one is welcomed and considered carefully.

Air Force doctrine belongs to all of us. We must study to understand it thoroughly, but we must do more than that. As professional Air Force officers, we must help to shape and enhance it to meet the challenges of tomorrow.

Headquarters USAF

Notes

1. Air Force Manual 1-1, *Basic Aerospace Doctrine of the United States Air Force* (Washington: Department of the Air Force, 1984).
2. *The Condensed Analysis* was originally published in March 1946 by the Office of Assistant Chief of Air Staff, A-2, Washington, D.C. In 1984, it was reissued by the Chief of Air Force History, Bolling AFB, D.C.
3. FM 100-20, *Command and Employment of Air Power* (Washington: War Department, 21 July 1943). This short Field Manual is reprinted in *Air Superiority in World War II and Korea*, edited by Dr. Richard H. Kohn and Joseph P. Harahan and published by the Office of Air Force History, Washington, D.C., in 1983 as part of its Project Warrior Studies.
4. FM 100-1, *The Army*, is currently under revision. It is expected that lessons learned about the relationship between the Army and the nation and the concept of three levels of war (strategic, operational, and tactical) will be incorporated in the new edition.
5. NWP 1, *Strategic Concepts for the U.S. Navy (Rev A)*, May 1978. Because of the way the U.S. Navy organizes, trains, and equips, its doctrinal development is quite different from that of the U.S. Army or the U.S. Air Force. Considerable authority is given to both CINCLANTFLT and CINCPACFLT in the development of doctrine and, in fact, much doctrinal development is assigned to one or the other or to commanders reporting to one or the other.
6. Currently, DOD Directive 5100.1 is addressed in AFR 55-18, *Functions of the DOD and Its Major Components*. This AFR will be superseded by AFM 1-4, *Missions and Functions of the U.S. Air Force*, which addresses the functions of the Air Force, both primary and collateral, and their relationship to Air Force missions. The new manual should be distributed by the end of 1984.
7. AFM 1-1, p. 3-3.
8. AFM 1-6, *Military Space Doctrine* (Washington, D.C.: Department of the Air Force, 15 October 1982), p. 8.
9. AFM 1-1, p. 3-6.
10. Bernard B. Fall, *Street without Joy* (Harrisburg, Pennsylvania: Stackpole, 1964); and Leslie H. Gelb and Richard K. Betts, *The Irony of Vietnam: The System Worked* (Washington, D.C.: Brookings Institution, 1979).
11. Arthur William Tedder, *With Prejudice: The War Memoirs of Marshal of the Royal Air Force, Lord Tedder* (Boston: Little, Brown, 1967); and Wesley F. Craven and James L. Cate, editors, *The Army Air Forces in World War II*, 7 volumes (Chicago: University of Chicago Press, 1948-1958).
12. Colonel Harry G. Summers, Jr., USA, *On Strategy: A Critical Analysis of the Vietnam War* (Novato, California: Presidio Press, 1982).
13. *Condensed Analysis*, p. 130.
14. *Ibid.*, p. 141.
15. Dr. Robert F. Futrell's *The United States Air Force in Korea, 1950-1953* (Washington: Office of Air Force History, United States Air Force, 1983) was originally published in New York by Duell, Sloan and Pearce in 1961. His *Ideas, Concepts, Doctrine: A History of Basic Thinking in the United States Air Force, 1907-1964* (Maxwell AFB, Alabama: Air University Press, 1984) was originally published by Air University in 1971.
16. Dr. Michael Gorn and Dr. Charles J. Gross, "Published Air Force History: Still on the Runway," *Aerospace Historian*, March 1984, pp. 30-37.
17. Wing Commander Maurice Baring, RAF, *Flying Corps Headquarters 1914-1918* (London: William Blackwood and Sons, 1968). First published in 1920 by G. Bell and Sons.
18. Field Manual 100-5, *Operations*, Headquarters Department of the Army, 20 August 1982.
19. Russell F. Weigley, *Eisenhower's Lieutenants: The Campaign of France and Germany, 1944-1945* (Bloomington, Indiana: Indiana University Press, 1981).
20. *Condensed Analysis*, p. 1.

21. Ibid., p. 96.
22. Lieutenant General John H. Cushman, USA (Ret), *Organization and Operational Employment of Air/Land Forces* (Carlisle Barracks, Pennsylvania: U.S. Army War College, 1984), p. 2-2.
23. Ibid.
24. *Condensed Analysis*, p. 98.
25. Thomas Lawson, *Officer Inflation: Its Cost to the Taxpayer and Military Effectiveness* (Washington, D.C.: Project on Military Procurement, June 1982, pp. 10-11).
26. Gorn, p. 30.
27. General Bennie L. Davis, "Indivisible Airpower," *Air Force Magazine*, March 1984, p. 46.
28. See, for example, *AirLand Battle 2000 (1982 Version with Functional Areas)* (Fort Monroe, Virginia: Headquarters TRADOC, 10 August 1982), pp. 9-10.
29. Edward N. Luttwak. Interview with author et al., Spring 1984.
30. AFM 1-6, p. 8.
31. The mailing address of Hq Air Force Doctrine and Concepts Division is: Hq USAF/XOXID, Washington, D.C. 20330.

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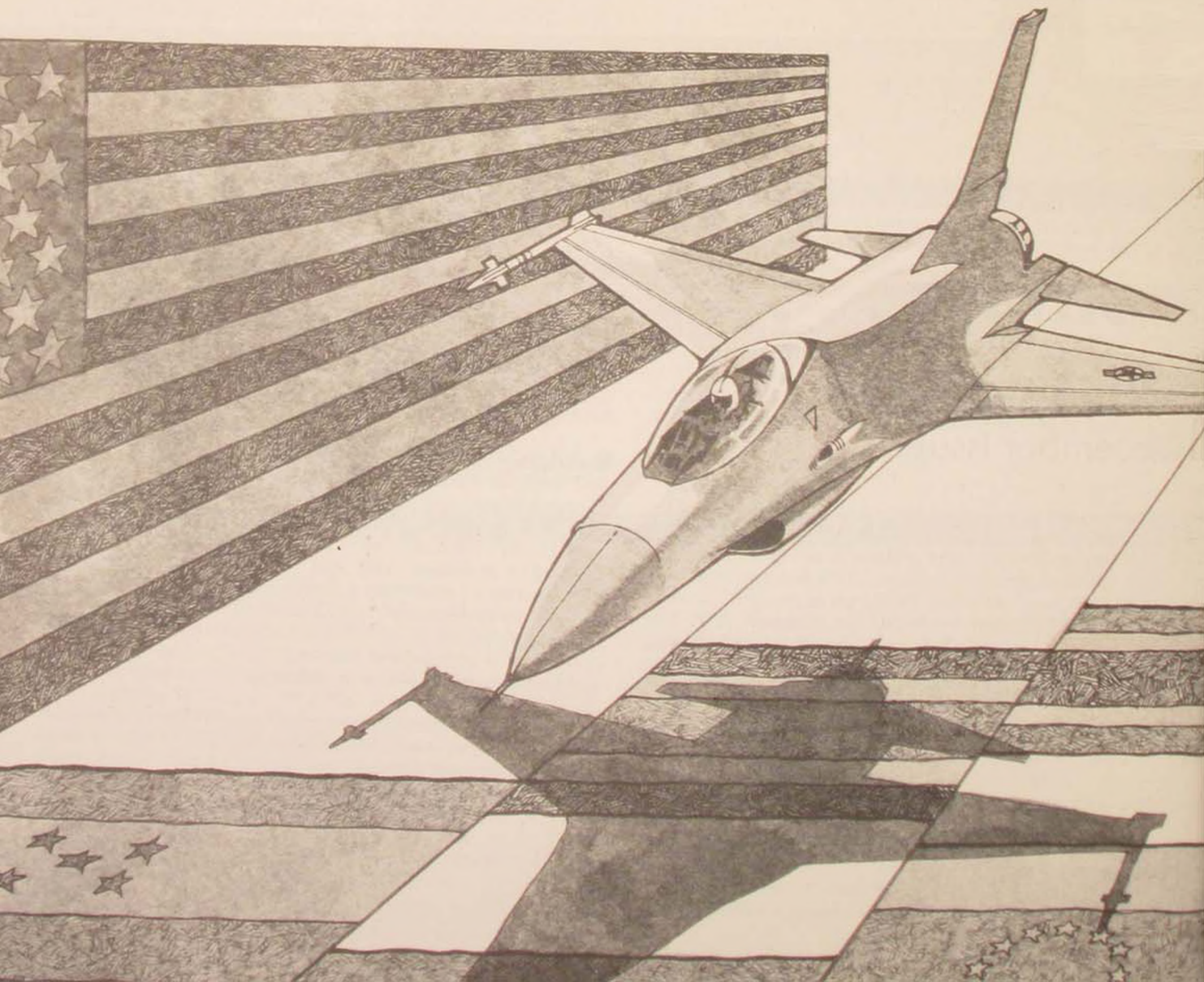
INTERNATIONAL ORDER AND AMERICAN POWER

DR. COLIN S. GRAY

THERE is no debate about the general goals of U.S. foreign policy: we seek peace and security. If the United States does not have adequate security, it will not enjoy peace for very long—or at least it will not have peace on terms with which Americans would want to live.

The capabilities, declarations, and actions

that collectively are termed *defense policy* should flow from the goals of foreign policy. Too much of the debate in this country about security matters is conducted out of political context. For example, one cannot make sense of the MX missile system unless one specifies the foreign policy burdens that argue for such a capability. In the words of former Secretary of



Defense James R. Schlesinger:

The authorization of the MX missile goes to the heart of the foreign policy objectives of the United States . . . It goes to the heart of arms control, it goes to the heart of our alliance relations.¹

Schlesinger was alluding to the long-standing fact that U.S. strategic nuclear forces are not designed solely to deter massive attack on the American homeland. They are also charged with providing a credible nuclear umbrella over distant allies in contexts where the forces deployed locally are known to be inadequate to withstand a Soviet assault. Strategic forces for extended deterrence must be capable of being employed flexibly against Soviet military targets.²

The same point can (and should) be applied more broadly. The quantity and quality of U.S. nuclear forces, as well as conventional and special forces, make sense only in terms of the security commitments with which U.S. foreign policy burdens U.S. defense policy. If one favors a great reduction in the scale of the U.S. defense effort, then one should favor a dramatic reduction also in the scale of U.S. overseas security commitments.

In principle, the United States does have a choice in foreign policy, therefore in the required character of its defense policy, and—by extrapolation—in the number and variety of weapons that it buys.³ At the present, the United States is the principal and essential organizer or guardian of Western security. That role emerged from the collapse of the European balance-of-power system in the first half of the twentieth century.

An important distinction that often is neglected is that between survival interests and vital interests.⁴ A survival interest is an interest that *must* be supported (fought for, if need be) if one's nation is to survive. A vital interest is an interest *worth* fighting for but not one that must be fought for to preserve the nation itself.

The United States has a survival interest in avoiding nuclear war. But many people fail to notice that the immediate danger of nuclear

war lurks not in the defense strategy chosen, mix of weapon systems acquired, and quality of arms control policy but rather in our adherence to security commitments overseas that bring the United States directly into conflict with the Soviet Union and its clients. If avoidance of nuclear war is the *overriding* priority (which, of course, it is not), there is something to be said for the United States' removing itself from those security entanglements that could lead to nuclear confrontation. The United States cannot perform in what amounts to a global guardianship role on the cheap. Anyone who proposes drastic cuts in the defense effort without, simultaneously, proposing a drastic reduction in foreign policy commitments in Europe, the Middle East, the Gulf, and East Asia is encouraging the United States to accept greater risks than it does today.

Soviet Power

It is essential that the character of Soviet power be addressed very explicitly. Regardless of what one thinks U.S. defense policy should be, the following points about the Soviet Union need to be understood. First, the Soviet Union is an imperial power that feels threatened by everything that it does not control. Soviet definition of its security needs is incompatible with the security of others.

Second, the Soviet reading of history, as well as Soviet state ideology, mandates relentless struggle against enemies within and without. The political legitimacy of the domestic authority of the Communist Party of the Soviet Union rests substantially, though not exclusively, on its claim to be the interpreter of the correct theory of historical change.⁵ By Soviet definition, the Soviet Union cannot wage an unjust war, while its weapons—again by definition—are stabilizing instruments and forces for peace; U.S. weapons, on the other hand, are destabilizing (the latter is a political view, not a technical one). A general settlement of differences is not feasible with the Soviet

state. The Soviet Union does not have finite security objectives that it can be allowed—after which it will settle back as a satisfied power.

Third, the basic fuel for Soviet antipathy toward the United States does not lie in objections to particular policies or weapons, although particular U.S. initiatives have triggered unusually forceful Soviet reactions. Rather, the Soviet quarrel with the United States is a quarrel with the existence of the United States as an independent security-organizing power in world politics.

Fourth, in worst imperial fashion, everything in Soviet security reasoning is connected to everything else. The Soviet Union is a multinational state in which the loyalty of a large fraction of non-Russian Soviet citizens to Moscow is questionable. The tranquillity of the Soviet territorial empire is threatened by movements for independence in the hegemonic empire in Eastern Europe.⁶ In their turn, the imperial “holdings” in Eastern Europe are imperiled by the social, economic, and political attractions of Western Europe; and the political independence of Western Europe is underwritten by the United States.

Fifth, Soviet leaders are careful opportunists, not “gangsters in a hurry” like the leaders of Nazi Germany. In geopolitical terms, Soviet long-range goals may usefully be appreciated in terms of two phases: first, to expel U.S. influence and security organization from the Eurasian periphery (i.e., to deny access); second, having confined the United States very largely to the Western Hemisphere and thereby achieved a revolution in the global correlation of forces, to outcompete with an isolated United States in all the crucial categories of power.⁷

This argument may be presented in terms of realpolitik, ideology, or some judicious mix of the two. Similarly, one may cast the Soviet Union in offensive or defensive character—it really does not matter very much. The point is that the Soviet Union does not, and really cannot, accept the idea that what it defines as non-progressive elements in the world have legiti-

mate interests. Thus, Soviet defense efforts must not be interpreted solely or even largely as responsive reactions to the U.S. (or any other) threat.

The name of the game in Eurasia is political intimidation in the shadow of military power. Of course, the Soviet Union does not want nuclear war; but one should recognize that the Soviet state has been at war with the Western democracies since 1917, in the sense of conducting what can be understood as a “war in peace.”⁸ In Soviet eyes, as Lenin made abundantly clear, any tactical accommodation is acceptable, provided it serves longer-run Soviet interests.⁹ The arms control process between the superpowers is, on the Soviet side, one among many instruments of political struggle. Yet this circumstance does not mean that the United States cannot do business with the Soviet Union. Soviet leaders are realists and will endorse tactical agreements for pragmatic reasons of near-term advantage or risk management.

Principles for U.S.-Soviet Relations

The United States plays the key role in organizing essential countervailing power to the Soviet Union. If the United States should cease to perform this role, no one else will (or can) substitute. There is no replacement candidate with sufficient power to perform the erstwhile U.S. global guardian mission. The Soviet Union would like nothing better than for the United States to withdraw its forces and its security commitments from around the littoral of Eurasia. In that happy event, in Soviet perspective, Soviet security relations with the states of peninsular Europe, the Middle East, the Gulf, and East Asia could be conducted on a one-to-one basis, where the disproportion in diplomatic weight would ensure very one-sided relationships indeed. The Soviet Union would like to see its relations with every country currently beyond the borders of its empire conducted af-

ter the model of its relationship with Finland. The Soviet Union, for certain, does not want to occupy Western Europe, but it does want the kind of respect that would allow it veto authority over the security policies of Western Europeans.

Several summary points are relevant here. First, one should recall the Golden Rule of History, that is, those with the weapons make the rules. Unlike Great Britain and the United States, Russia/the Soviet Union has not enjoyed a geographically based security that enabled it to neglect the Golden Rule. Furthermore, the Soviet Union is not interested in resting its security on goodwill. Soviet leaders require the respect and obedience that comes more reliably from fear. While it is true that nothing remains unchanged forever and that the Soviet Union of fifty or a hundred years from now may be considerably different from that of yesterday or today, one cannot foresee the future. U.S. policy must be designed to cope with the world as it is.

No one can guarantee that his preferred policies will ensure peace and security. But the history of statecraft in general and the record of American relations with the Soviet Union in particular suggest some thoughts that should help guide the design and execution of U.S. foreign policy.¹⁰

First, an authoritarian state that is seeking total security will not respond benignly to gestures of goodwill, measures of unilateral disarmament, or the dismantling of rival military alliances.

Second, American behavior today feeds expectations for tomorrow. The greatest barrier to miscalculations that could produce war is a steadiness in U.S. policy and responses. A democracy that does not resist encroachment on its interests on four or five occasions can mislead an authoritarian state easily into not expecting a military reaction on a fifth or sixth occasion. The unpredictable drawing of lines, as the British did over Poland's frontiers in 1939 and as the United States did over Korea in

1950, is the stuff of which war by miscalculation is made.

Third, Soviet and Soviet-allied power flows wherever it is not opposed. It is almost always difficult to rationalize resistance in any particular instance. In and of itself, in American terms, U.S. territory aside, probably no piece of real estate is worth the serious risk of nuclear war. But a United States committed to the global containment of Soviet power and influence has to regard each of its overseas interests not only in the light of their intrinsic value for U.S. security but also in the context of their symbolic value. The U.S. reputation as a reliable provider of security is the greater part of the U.S. interest in most of the individual cases where American clients might be threatened by the Soviet Union or its clients.

The Soviet Union is an imperial power that feels threatened by everything that it does not control.

Fourth, if the United States were to choose to behave on the basis of an overriding (and, in many ways, sensible) fear of nuclear war, it could be intimidated out of fulfilling any overseas foreign-policy commitment by a Soviet Union that seems less intimidated by nuclear dangers.

Fifth, in a nuclear age, it is not controversial to say that the United States must have a nuclear strategy.¹¹ Nuclear weapons cannot be disinvented, and nuclear threats are very important as a backstop to U.S. diplomacy because of the geography of East-West conflict (the United States and its allies have major and apparently enduring deficiencies in nonnuclear forces in Europe). Anyone who would do away with nuclear threat and the nuclear arms competition has to explain how the political structure of competition that sustains the arms

race is first to be transformed.

A 1982 bestseller by Jonathan Schell painted a truly gothic picture of the risks that are endemic in a security system that rests on reciprocated nuclear threats, but the author failed in that work to explain how the necessary political transformation in human security arrangements might be effected.¹² Despite this nontrivial weakness in his analysis, Schell at least recognized that there can be no comprehensive escape for the human race from nuclear danger unless the political millenium can be made to happen. Subsequently, however, in replying to his many critics, Schell has attempted to design a proposal for nuclear safety that would not require the prior pooling of national sovereignties in a single global authority.¹³ Schell now seeks to persuade his readers that deterrence, including nuclear deterrence, would continue to function in a world of nuclear-disarmed states (there would be a fear of rearmament). It would be a gross understatement to say that the plausibility and rigor of his more recent argument leaves a very great deal to be desired.

Much of the more orthodox arms control literature suggests that the road to safety lies through better management of the arms competition. There is no prospect that START agreements could effect sufficient reductions in superpower nuclear arsenals to preclude the possibility that a nuclear war would trigger a so-called nuclear winter. For radical measures of nuclear disarmament to be even remotely feasible politically and strategically, the superpowers would need to deploy competent ballistic missiles and air defenses to "police" their officially disarmed counterparts.¹⁴

Implications for U.S. Policy

Even if the United States were to change its foreign policy drastically away from global containment and intervention, security travail and danger for Americans would not vanish as a consequence. The Soviet client-state system

in Eurasia would expand, and the geopolitical terms of the Soviet-American competition would be altered greatly to the disadvantage of the United States. Just as the Bolsheviks discovered early in 1918 vis-à-vis Imperial Germany, one cannot simply declare "no war, no peace," go home, and expect an adversary who has very strong incentives to continue the struggle to abide by one's unilateral preference for a quieter life.¹⁵ As noted earlier, truly irresponsible people would cut U.S. military forces but seek to leave U.S. foreign policy intact. In other words, there would be far fewer means to protect U.S. overseas interests. Already, military limitations are a severe problem. U.S. foreign security commitments have grown since the early 1950s, as the United States inherited security duties on behalf of former colonies and clients of the European powers. But while the U.S. foreign policy burden has increased, the Soviet Union has transformed the military balance since the 1950s, neutralizing previously clear U.S. military advantages, particularly in the realms of strategic nuclear and naval forces.

Soviet and Soviet-allied power flows wherever it is not opposed.

If the United States were to step back from what, pejoratively, is called its "global policeman" role, peace would not break out (either for the United States or for others). Instead, local powers would have to find substitute policies for their previous American security connection. In some cases, the result would be nuclear proliferation; in many others, a prudential drift toward acceptance of a more or less tacit Soviet hegemony (a client-state relationship). The United States would find itself more and more isolated in the world—moreover, it would be so in a world that still contained a Soviet empire both committed to the downfall

of its only first-class adversary and encouraged to press its claims by the plain evidence of American retreat.

A good argument can be turned into a bad argument if it is translated without finesse or discrimination into policy recommendations. It is important that the United States be a steadfast friend and ally, but that steadfastness must be understood to be of a contingent character. The United States should not write blank security checks for anybody (regardless of their regional behavior or domestic practices). If local clients persist in pursuing their local interests in ways that have the effect of transforming them into net security liabilities to the United States, then they should be abandoned to find their own salvation.

It should be clearly understood that a security-client relationship with the United States does not come cost-free. Clients cannot enjoy the benefit of U.S. protection and at the same time be at liberty to pursue military adventures (among other sins) of which the United States disapproves very strongly. From time to time, quite properly, the United States may choose to confine its disapproval to private remonstrance only. Such will be the case in circumstances where a net assessment of the costs and benefits to U.S. security of continuing the formal security connection proves to be positive. Needless to say perhaps, abandonment and "support as usual" comprise only the poles on the range of policy possibilities. More often than not, the foreign policy choice is not one of either/or.

A good example of just how difficult the role of security provider can be is the case of U.S. relations with Greece and Turkey. In geostrategic terms, Greece is important to the United States, but Turkey is essential. The Turkish invasion of Cyprus in 1974 posed a most undesirable choice between allies for U.S. policymakers. Sometimes choice cannot be avoided (as between Britain and Argentina in 1982), but often, clear choice can be evaded (as between Greece and Turkey)—though at a price. The general consequence of the evasion of clear choice is that all

local parties to the dispute come to view the United States as an insufficiently steadfast ally.

The United States must be willing to back its diplomacy with force where necessary. Certainly, it should be slow to anger and should remember that military power often is most effective when it is not expended in action.¹⁶ Nonetheless, a reputation for meaning what one says is essential. There are rare occasions when there is no substitute for military deterrence and, if need be, for the use of force (for example, in a British case, over the Falklands). Timely demonstration of a willingness to defend a vital interest can preclude very dangerous misperceptions.

It should be clearly understood that a security-client relationship with the United States does not come cost-free.

Soviet and Cuban policies will, of course, seek to exploit whatever opportunities for mischief local conditions permit. It is important that international perceptions to the effect that there is a "tide of history" favoring Soviet-assisted elements be corrected and reversed, and those perceptions can be corrected and reversed only as a consequence of actions, not by words alone (which is why the Grenada operation in October 1983 was so significant). People who contemplate asking assistance of Cuba or the Soviet Union should understand that major risks for them will accompany such assistance.

I do not favor a trigger-happy United States, glorying in an international "bully" role and simplistically defining any and every local conflict in terms of the East-West competition. Just as nobody wants nuclear war, nobody desires indiscriminate military intervention overseas.

The contemporary architecture of American foreign policy is both necessary and honorable. It is necessary for the preservation of U.S. national

security and for the maintenance of the global balance of power and such international order as we enjoy. It is honorable in that it is intended, insofar as real-world conditions permit, to sustain and encourage the values that are central to decent human existence.

FINALLY, it is necessary to address directly the question of risk to Americans implied thus far. There can be no ignoring the fact that the survival of the United States and its people is threatened most immediately by Soviet military power as a consequence of the security guarantees that the U.S. government has extended to countries around the periphery of Eurasia. The first-strike requirement with which U.S. long-range theater and strategic nuclear forces are burdened reflects not U.S. choice in nuclear strategy but, rather, the logical necessity of providing a deterrent continuum against the contingency of unfolding regional defeat on the ground.

The United States must be willing to back its diplomacy with force where necessary.

It is likely that the United States could secure some considerable near-term relief from the danger of nuclear war if it were to decide to contract its defense perimeter back to the Western Hemisphere (and perhaps selectively even there) and to abandon, unambiguously, the grand strategy of global containment that it has pursued since the late 1940s. The occasions for super-power confrontation, so the argument proceeds, would have to shrink dramatically if the United States ceased to act as the supportive keystone in the arch of anti-Soviet alliances around littoral Eurasia.

However, apparently commonsense logic that

holds that security guarantees are simply too dangerous to the guarantor in a nuclear-armed world neglects some inescapable facts of our age.¹⁷ First, the United States is not at liberty to decide to cultivate its garden inoffensively in North America—leaving the Old World to settle its security dilemmas as best it can. As I have argued earlier, Soviet-American competition is inescapable.

Second, the nuclear age is irreversible. The most crucial atomic secret was revealed in 1945 at Alamogordo, New Mexico: the atomic bomb worked. There are no alternatives to the nuclear age. Just as the United States cannot find security through choosing once again to retire from world politics, so it cannot remove definitively the nuclear threat to its existence by any measure of unilateral or even negotiated bilateral (or multilateral) nuclear disarmament. If nuclear disarmament should ever be feasible, so would nuclear rearmament if the political incentive were present.

Third, nuclear dangers may be alleviated to some modest degree by strengthening conventional deterrence, but both history and logic suggest that the United States cannot escape the worst of nuclear dangers by emphasizing nonnuclear defense preparation. Deterrence may be enhanced were Soviet military planners and political leaders to be decreasingly confident that they could achieve rapid success in a conventional blitzkrieg in Europe.¹⁸ However, it is prudent to reason that Soviet leaders could never be wholly confident that they could control the type of weaponry that would be employed in a massive attack against a heavily nuclear-armed NATO. Moreover, it is reasonable to assume that conservative Soviet leaders would attach more importance to the war/peace threshold than to the conventional (chemical?)/nuclear one. A Soviet Union sufficiently motivated politically to choose to invade NATO-Europe would be, one should presume, a Soviet Union sufficiently determined and prepared to employ whatever kind and quantity of weapons might be required for the securing of victory in the theater. It

should be noted that NATO-European governments have been scarcely more enthusiastic about providing the means for the strengthening of conventional deterrence than they have been about designing a theater nuclear war-fighting doctrine and posture for the restoration of deterrence.¹⁹

If nuclear disarmament should ever be feasible, so would nuclear rearmament if the political incentive were present.

Given that the nuclear age cannot be rescinded and that fundamental Soviet enmity toward a United States that is beyond Soviet control is

inescapable, it follows that the United States has no choice other than to seek to manage the threat posed by Soviet power to an international order that is compatible with the security of important American interests. No deus ex machina is going to rescue the United States from nuclear insecurity. However, nuclear-age dangers can be alleviated, though certainly not resolved, by steadiness in providing military deterrent muscle of all kinds and through energetic exploration of the technological possibilities for strategic defense of the United States and its allies. Active defenses against ballistic missiles, aircraft, and cruise missiles can do little to promote political peace, but they may be able to have a very marked, benign impact on the scale of danger to which the U.S. homeland is exposed as a result of the inalienable political struggle with the Soviet imperium.

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Notes

1. Testimony in U.S. Congress, Senate Committee on Foreign Relations, *President's Commission on Strategic Forces, Hearing*, 98th Cong., 1st sess. (Washington: U.S. Government Printing Office, 11 May 1983), p. 6.

2. The relationship between foreign policy commitments and nuclear strategy and forces is explored in Colin S. Gray and Keith B. Payne, "Nuclear Strategy: Is There a Future?" *Washington Quarterly*, Summer 1983, pp. 55-66; and Earl C. Ravenal, "Counterforce and Alliance: The Ultimate Connection," *International Security*, Spring 1982, pp. 26-43.

3. For a detailed examination of some alternative conceptions for U.S. national security policy, see Colin S. Gray, *Basic U.S. Choices, 1982-2000* (Fairfax, Virginia: National Institute for Public Policy, March 1983), particularly chapters 10-12.

4. This distinction is made and applied rigorously in Donald E. Nuechterlein, "National Interests and National Strategy: The Need for Priority," in Terry L. Heyns, editor, *Understanding U.S. Strategy: A Reader* (Washington: National Defense University Press, 1983), pp. 35-63.

5. Other sources of legitimacy include the longevity of Soviet rule; the Party's role, real and fabricated, as organizer of victory in the Great Patriotic War; and the ability of the regime to satisfy the economic expectations, if not aspirations, of the Soviet peoples. A useful discussion of the issue of political legitimacy is Seweryn Bialer, *Stalin's Successors: Leadership, Stability, and Change in the Soviet Union* (Cambridge: Cambridge University Press, 1980), Chapter 9.

6. See Edward N. Luttwak, *The Grand Strategy of the Soviet Union* (London: Weidenfeld and Nicolson, 1983); Helene C. d'Encausse, *Decline of an Empire: The Soviet Socialist Republics in Revolt* (New York: Newsweek, 1979); and Gary L. Guertner, "Strategic Vulnerability of a Multinational State: Detering the Soviet Union," *Political Science Quarterly*, Summer 1981, pp. 209-23.

7. On the geopolitics of Soviet-American competition, see Colin S.

Gray, *The Geopolitics of the Nuclear Era: Heartland, Rimlands, and the Technological Revolution* (New York: Crane, Russak, 1977).

8. See Robert Bathurst, "Two Languages of War," in Derek Lee-baert, editor, *Soviet Military Thinking* (London: Allen and Unwin, 1981), Chapter 2.

9. Several examples in Soviet history illustrate short-term accommodation to achieve long-term gains. In March 1918, the Soviet Republic accepted a humiliating peace treaty with Imperial Germany at Brest-Litovsk; while in August 1939, Stalin signed a nonaggression with Nazi Germany (the Molotov-Ribbentrop Pact), which, de facto, bought time for the Soviet Union at the price of giving Hitler a free hand in the West. Lenin's rationale for accepting Brest-Litovsk may be found in V. I. Lenin, "Theses on the Question of the Immediate Conclusion of a Separate and Annexationist Peace," 20 January 1918, in Alvin Z. Rubinstein, editor, *The Foreign Policy of the Soviet Union*, third edition (New York: Random House, 1972), pp. 53-58. Both the Molotov-Ribbentrop Pact and Molotov's official explanation of the rationale for the treaty can be found in the same work, pp. 136-44.

10. An excellent review of the history of Soviet-American negotiations is U.S. Congress, House of Representatives, Committee on Foreign Affairs, *Soviet Diplomacy and Negotiating Behavior: Emerging New Context for U.S. Diplomacy*, Special Studies Series on Foreign Affairs Issues, Vol. 1 (Washington: U.S. Government Printing Office, 1979).

11. See Colin S. Gray, "Nuclear Strategy: A Regrettable Necessity," *SAIS Review*, Winter-Spring 1983, pp. 13-28.

12. Jonathan Schell, *The Fate of the Earth* (New York: Knopf, 1982).

13. Jonathan Schell, *The Abolition* (New York: Knopf, 1984).

14. I have explored this question in some depth in *Strategic Defense and National Security: The Policy Challenge*, Information Series No. 159 (Fairfax, Virginia: National Institute for Public Policy, November 1983), and "In Defense of Disarmament," *Bulletin of the Atomic Scientists*, July 1984, pp. 46-47. For discussion of the issues of transi-

tion, see Keith B. Payne and Colin S. Gray, "Nuclear Policy and the Defensive Transition," *Foreign Affairs*, Spring 1984, pp. 820-42.

15. See Adam Ulam, *Expansion and Coexistence: The History of Soviet Foreign Policy from 1917-1967* (London: Secker and Warburg, 1968), p. 67. On 10 February 1918, Leon Trotsky "read to the dumb-founded enemy delegates a declaration that Russia was proclaiming the end of the war without signing a peace." (Emphasis in the original.)

16. A powerful exposition of this view is Edward N. Luttwak, *The Grand Strategy of the Roman Empire: From the First Century A.D. to the Third* (Baltimore: Johns Hopkins University Press, 1976), particularly pp. 195-200.

17. The formal rationale for the development of France's *force de frappe* has always been that no country, no matter how honorable its intentions, can be trusted, or should be expected, to assume risks to its own survival on behalf of others. In recent years, some European commentators have expressed the fear that the U.S. nuclear guarantee may mean that European security is hostage not so much to American firmness of will but rather to American steadiness and wisdom—both of which have been questioned severely. Henry Kissinger caused sizable tremors throughout NATO-Europe in 1979 when he said: "... our European allies should not keep asking us to multiply strategic assurances that we cannot possibly mean or if we do mean, we should not want to execute because if we execute, we risk the destruction of civilization." See "The Future of NATO," in Kenneth A. Myers, editor, *NATO: The Next Thirty Years* (Boulder, Colorado: Westview, 1980), p. 8. This book comprised conference papers delivered in September 1979. European anxiety about the steadiness of U.S. policy is strongly implied in Michael Howard, "Reassurance and

Deterrence: Western Defense in the 1980s," *Foreign Affairs*, Winter 1982/83, pp. 309-24.

18. See European Security Study, *Strengthening Conventional Deterrence in Europe: Proposals for the 1980s* (New York: St. Martin's, 1983); Thomas A. Callaghan, Jr., "Can Europe Be Defended?" *Policy Review*, Spring 1983, pp. 76-85; John J. Mearsheimer, *Conventional Deterrence* (Ithaca, New York: Cornell University Press, 1983); William W. Kaufmann, "Non-nuclear Deterrence," in John D. Steinbruner and Leon V. Sigal, editors, *Alliance Security: NATO and the No-First-Use Question* (Washington: Brookings, 1983), Chapter 4; Elmar Dinter and Paddy Griffith, *Not over by Christmas: NATO's Central Front in World War III* (Chichester, United Kingdom: Antony Bird, 1983); Richard K. Betts, "Conventional Strategy: New Critics, Old Choices," *International Security*, Spring 1983, pp. 140-62; and the subsequent "Correspondence" between Betts and Edward N. Luttwak in *International Security*, Fall 1983, pp. 176-82.

19. The long-term defense plan (LTDP) adopted by NATO in 1978 called for achievement of 3 percent per annum growth in real defense expenditures for a ten-year period in order to correct deficiencies across-the-board in conventional forces. As of 1984, the LTDP essentially is dead. For example, in November 1983, the British government announced that it would be unable to meet the requirements of the LTDP. While there are economic reasons for the unwillingness of most NATO-European countries to meet the LTDP goals, European distaste for a true conventional "war-fighting" strategy goes far deeper than economic considerations alone. See Colin S. Gray, "NATO Defense and Arms-Reduction Proposals," *Military Review*, October 1983, pp. 62-68.

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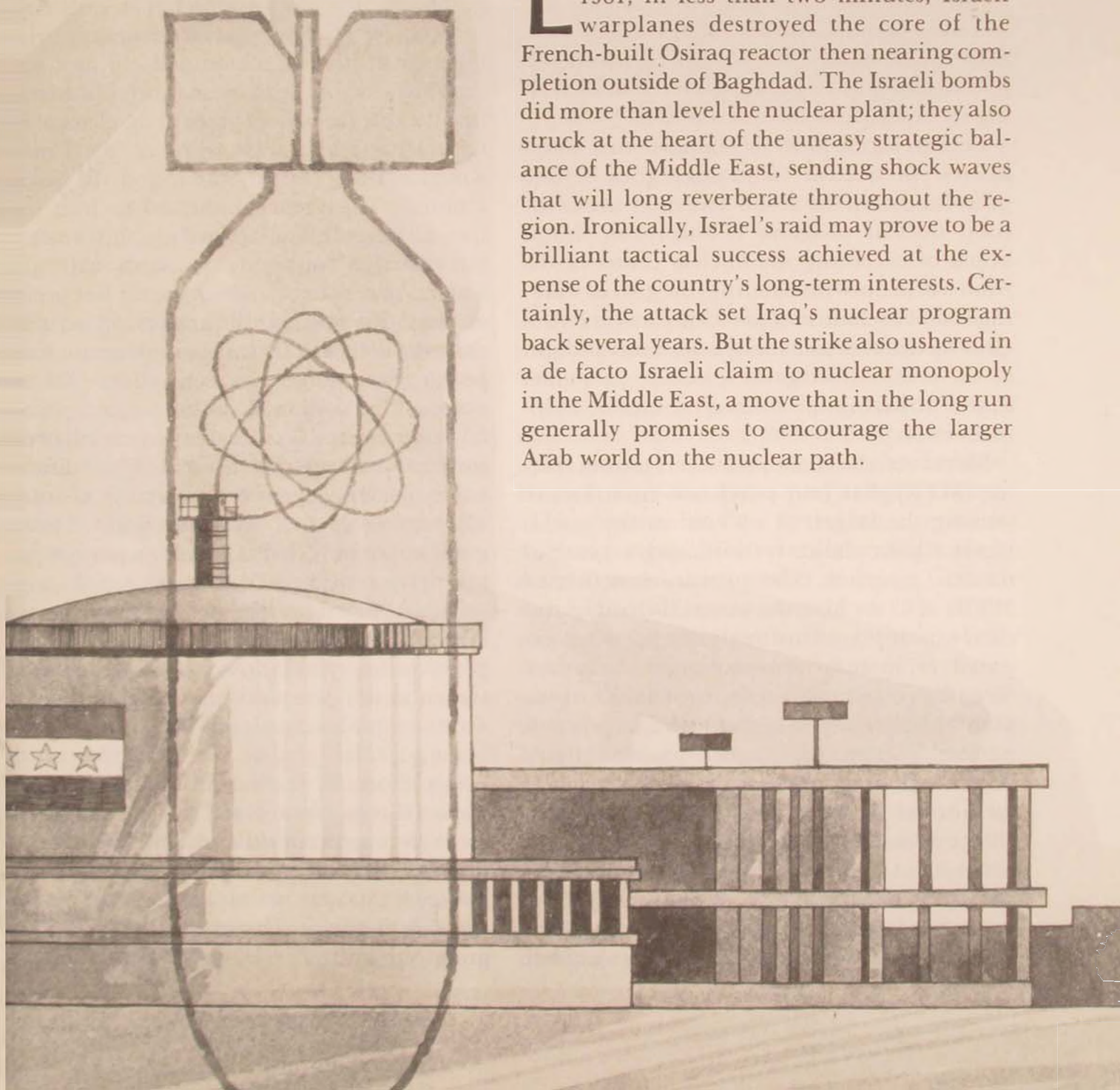
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THE ISRAELI STRIKE AGAINST OSIRAQ

*the dynamics of fear and proliferation
in the Middle East*

LUCIEN S. VANDENBROUCKE

LATE on a Sunday afternoon in June 1981, in less than two minutes, Israeli warplanes destroyed the core of the French-built Osiraq reactor then nearing completion outside of Baghdad. The Israeli bombs did more than level the nuclear plant; they also struck at the heart of the uneasy strategic balance of the Middle East, sending shock waves that will long reverberate throughout the region. Ironically, Israel's raid may prove to be a brilliant tactical success achieved at the expense of the country's long-term interests. Certainly, the attack set Iraq's nuclear program back several years. But the strike also ushered in a de facto Israeli claim to nuclear monopoly in the Middle East, a move that in the long run generally promises to encourage the larger Arab world on the nuclear path.



CONSIDERABLE controversy surrounds Iraq's nuclear program. The Iraqis insist that their intentions are peaceful, pointing out that Iraq is a party to the Nonproliferation Treaty and has agreed to operate its nuclear facilities under the safeguards of the International Atomic Energy Agency (IAEA). Furthermore, there is no doubt that an Iraqi program of peaceful nuclear development makes economic sense. Although the country has some of the largest petroleum reserves in the world, the Iraqis are justified in preparing for the day when the oil wells run dry.¹ Iraq also aspires to make rapid strides in its technological development and has a legitimate interest in increasing its expertise in the nuclear field.

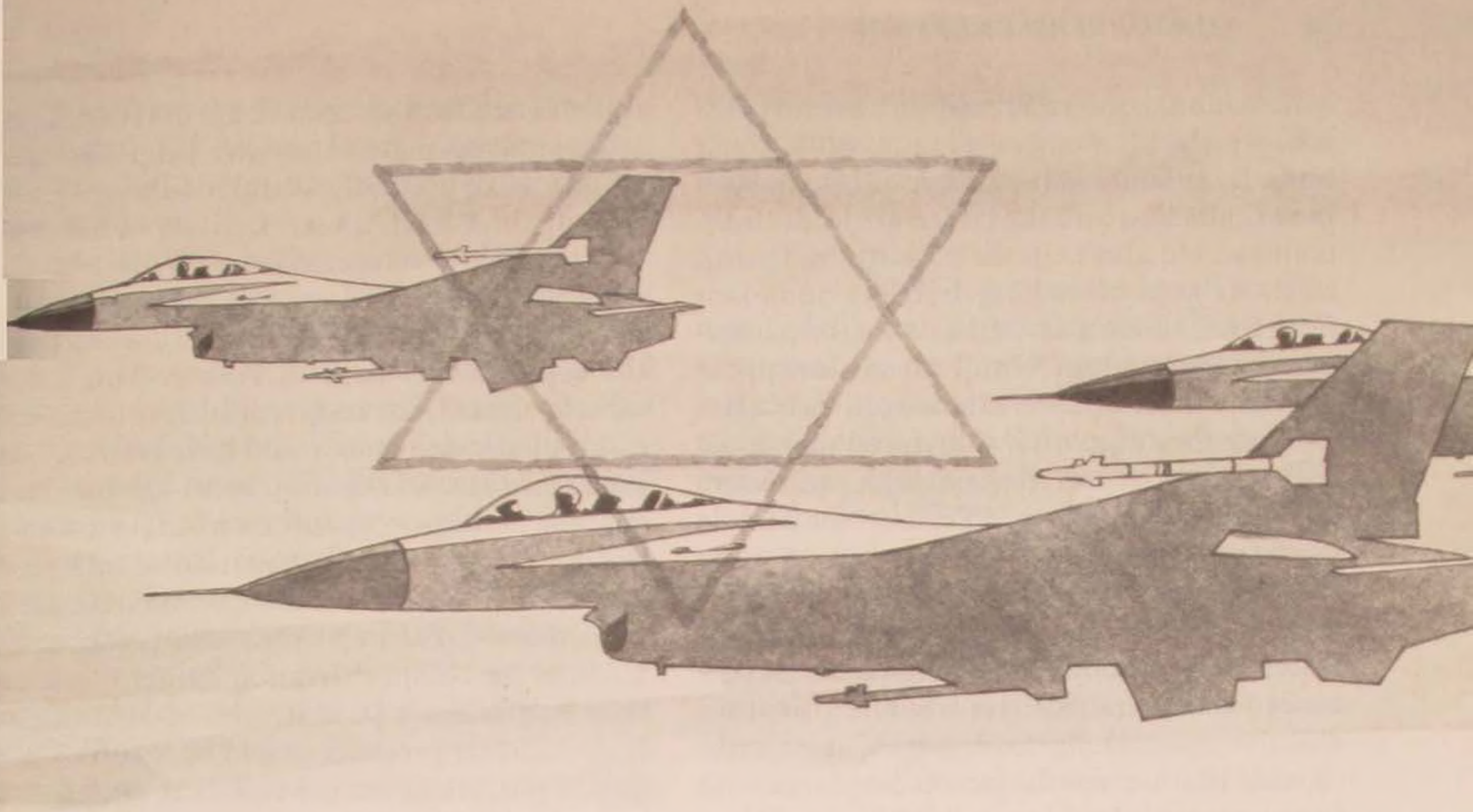
Certain signs, however, indicate that Iraq's interest in nuclear technology goes beyond peaceful uses of the atom. The sheer size of the Iraqi nuclear program is surprising. Iraq's hopes of becoming the nuclear center of the Arab world notwithstanding, the goal of training 500-600 scientists and technicians at its nuclear facilities is unusually ambitious in light of the severe shortage of scientific personnel that is afflicting the country's other development efforts.

Moreover, the Osiraq materials testing reactor (MTR) that Iraq purchased from France (among the largest of its kind in the world) seems a poor choice for initiating a peaceful nuclear program. The primary function of MTRs is to see how the materials used in nuclear power plant construction react when exposed to intense and prolonged radiation. Since Iraq does not manufacture nuclear power plants, the usefulness of Osiraq for its peaceful nuclear program remains questionable. If Iraq's objective is weapons-grade fissionable material for nuclear weapons, Osiraq becomes a good choice because it can conceivably supply this material in two ways. First, the reactor fuel, consisting of highly enriched uranium (HEU), well suited for nuclear weapons production, could be diverted for military use. Another

path to fissionable material lies in the irradiation of targets of natural or depleted uranium inside the reactor. These targets are partially transformed through neutron bombardment into weapons-grade plutonium, which can then be extracted and used to make nuclear devices.²

The pattern of Iraq's nuclear efforts indicates that such access to fissionable material is a major objective of the country's nuclear program. Upon first approaching the French nuclear industry in 1974-75, Iraq requested a gas-graphite power reactor, which is an inefficient source of electricity but an excellent supplier of large quantities of plutonium. (In fact, gas-graphite reactors produce so much plutonium that they are the major source of the element for the military programs of France, the United Kingdom, the United States, and the Soviet Union.)³ The French indicated to Iraq that they no longer manufactured graphite reactors but that they could offer conventional light-water power reactors, which are far less proliferating. Rejecting this proposal, Iraq then shifted the focus of its nuclear program from power generation to research and, in 1976, acquired Osiraq—a facility which again offered far better access to fissionable material than did conventional power reactors.⁴ When France subsequently suggested replacing Osiraq's weapons-grade fuel with the non-weapons-grade caramel fuel that French scientists had just developed, the Iraqis again refused.⁵

This apparent willingness to settle for any kind of reactor, provided it was of the more proliferating type, followed by Iraq's refusal to switch to non-weapons-grade fuel, points toward a major Iraqi desire to obtain bomb-grade material. This goal is further evidenced by Iraq's efforts in the late 1970s to acquire an Italian Cirene-type reactor. Again, Iraq's interest in an uneconomical reactor that remains in the experimental stage seems surprising, unless the Iraqis were mainly attracted by Cirene's capacity to produce large amounts of weapons-grade plutonium.⁶



Still other signs indicate Iraq's interest in weapons-grade fissionable material. Iraq has purchased large quantities of uranium ore and depleted uranium for which there is little conceivable use in a peaceful nuclear program. As previously noted, both substances can be irradiated in Osiraq to produce plutonium. This scenario becomes all the more plausible since Iraq has acquired both a fuel fabrication laboratory and a "hot cell." The Iraqis can use the laboratory to fashion natural and depleted uranium targets for insertion into the reactor; then they can recover the plutonium from the irradiated targets in the hot cell.⁷

The size of the Iraqi program, the country's obstinate search for a reactor providing good access to weapons-grade material, the refusal of substitute fuel for Osiraq, and the purchase of the uranium and facilities needed for plutonium production all indicate a high degree of interest in fissionable material. While this pattern does not necessarily prove that Iraq's nuclear efforts are merely a military program

in disguise, it does suggest that the civilian program contains a hidden agenda: preparing for an eventual Iraqi bomb.

The Iraqis themselves have made certain statements confirming their interest in nuclear weapons. In 1975, the Iraqi leader Saddam Hussein described his country's efforts to buy a nuclear reactor as "the first Arab attempt at nuclear arming." Two years later, Naim Had-dam, a prominent member of Iraq's Central Revolutionary Command, declared: "The Arabs must get an atomic bomb. The countries of the Arab world should possess whatever is necessary to defend themselves." Then, immediately after the raid on Osiraq, Hussein denied that Iraq's nuclear program had any military implications. But he also added: "Any state in the world which really wants peace . . . should help the Arabs in one way or another to acquire atomic bombs."⁸

The Iraqis have several real incentives to acquire nuclear weapons. Joining the nuclear club promises domestic gains, for it would in-

spire national unity and pride in a country that is badly divided along ethnic and confessional lines. By enhancing the stature of Iraq in both the Middle East and the larger world, an Iraqi bomb would also help the nation's leadership reach its goal of making Iraq the dominant power in the Gulf as well as a major participant in world affairs.⁹ Iraqi rulers also appear to believe that nuclear weapons would enhance their country's security. Convinced that Israel is a nuclear state, the Iraqis view an Arab bomb as a necessary deterrent: "Peace in the Middle East requires an Arab bomb today. . . . This is necessary to maintain equilibrium and to prevent the Israelis from using their bomb against Arabs."¹⁰ No doubt the Iraqis are likewise persuaded that an Iraqi deterrent would also prove effective against neighboring Iran, at least until the Islamic revolution had a large and threatening nuclear program of its own.

On balance, then, while there is no incontrovertible proof of Iraq's intention to obtain nuclear weapons, the characteristics of its nuclear program, combined with the statements and incentives of its leadership, make it highly likely that Iraq wishes to acquire at the very least the capacity to build nuclear weapons.

There remains the question, however, of how close Iraq had come to this objective at the time of the Israeli strike. Here, the preponderance of the evidence indicates that although Iraq's program would have given the nation a nuclear capability eventually, it was unlikely to pose an immediate threat.

In principle, Osiraq might have supplied weapons-grade material both by diversion of the reactor fuel and by production of plutonium. Yet in practice, neither scenario was likely, given the safeguards on the Iraqi reactor, including regular visits by IAEA officials and a permanent presence of French technicians until 1989. Of the two paths to fissionable material, diversion of reactor fuel probably looked the least attractive. Osiraq and its accompanying Isis reactor, a small training facility also supplied by France, were designed to

run on a fuel load of about 12 kgs of HEU each. Isis would run indefinitely on a single charge, while Osiraq normally would require approximately three loads a year. Delivery of fuel for Osiraq was to be staggered, however, the French supplying a new charge only when the previous one had been spent and always sending the depleted fuel back to France. Thus, the most fresh HEU the Iraqis could have hoped to divert at any one time would have been a load each from Isis and Osiraq, or 24 kgs in all—enough perhaps to produce a single atomic bomb.¹¹ Preventing the operation of the reactors, such a diversion would have been noticed immediately. France, which has pledged to abide by the Nonproliferation Treaty,¹² would have had to cease its deliveries of HEU, and Iraq's nuclear program would have come to a halt. Thus, while on the face of it, the Iraqis had secured the option to divert HEU, in reality they were bound to find fuel diversion highly unappealing because of the costs and risks involved.

Nor did the second path to proliferation, clandestine production of plutonium by irradiation, hold out much more promise. For one thing, the specially shielded transportation devices needed to move the irradiated uranium targets are next to impossible to conceal.¹³ Similarly, irradiating the targets themselves was unlikely to escape notice. Producing enough plutonium for one bomb entails inserting about five hundred natural uranium rods, weighing a total of twenty tons, into the reactor core. As the reactor accommodates approximately twenty such assemblies at a time, the process involves repeated movements in and out of the reactor core of targets that look very different from the irradiation capsules used in any legitimate experiment. In addition, inserting and removing the uranium targets is a difficult and time-consuming process, calling for high technology and reactor shutdown.¹⁴ The production of enough plutonium for a bomb would thus generate visible and suspicious activity at the core that could hardly escape ob-

ervation by the French technicians, visiting International Atomic Energy Agency inspectors, or the IAEA's permanent surveillance cameras at the site.

It is therefore highly unlikely that with the agreed-on safeguards, Iraq could have produced significant quantities of fissionable material without detection, which, in turn, would have automatically triggered a French cutoff of reactor fuel. Nevertheless, had the Iraqis somehow evaded supervision and secretly produced plutonium while feigning to operate the reactor in normal research fashion, Iraq might have obtained up to a kilogram of plutonium a year, or enough for one or two bombs over a ten-year period.¹⁵

Iraq, of course, could have withdrawn from the Nonproliferation Treaty and canceled its agreement with France. Such a step would have left the Iraqis free to operate the reactor without supervision. Once cut off from the French supply of HEU, however, it is improbable that Iraq could have secured additional reactor fuel. At present, there are only six other potential suppliers of highly enriched uranium, none of whom could be expected to assist in an unsupervised operation of Osiraq.¹⁶ Withdrawal from the Nonproliferation Treaty and unsafeguarded use of the reactor could have become a plausible scenario only several years from now, when additional suppliers of enriched uranium, such as Pakistan or Brazil, will appear on the market and might be willing to supply Iraq with unsafeguarded reactor fuel.

While it seems highly reasonable to assume that Iraq's civilian nuclear program conceals a military rationale and that Osiraq provided a foundation for an eventual Iraqi weapons program in the latter half of the decade, it is highly unlikely that the reactor would have provided Iraq with nuclear devices in the immediate future. Nevertheless, as one specialist commented, "to say that successful diversion would have been unlikely, or for that matter very unlikely, is not to say that it would have been impossible. The distinction is important and should be

kept in mind."¹⁷ The difference was not lost on the Israelis, who chose not to gamble on the odds, no matter how favorable.

SINCE most of the Israeli government's deliberations leading to the June 1981 raid remain secret, it is difficult to ascertain the full range of considerations that entered into the decision to bomb Osiraq. It is clear, however, what while Israeli leaders had worried about the Iraqi nuclear program for years, they had been divided over the appropriate response. The Begin government's decision to attack the reactor, reached essentially by the Ministerial Defense Committee, a subcabinet group, reflected these divisions. While Prime Minister Menachem Begin, Foreign Minister Yitzhak Shamir, Agricultural Minister Ariel Sharon, and Chief of Staff General Rafael Eytan pushed vigorously for a strike, several other ministers opposed the idea but lost in the final decision process. There was also strong dissent from other quarters. When news of the Begin government's plan was leaked to former Prime Minister and opposition leader Shimon Peres, he opposed the idea, as did the other senior members of his party with whom he shared the information. Peres even made a last-minute plea to Begin in an effort to reverse the decision.¹⁸

Several observers have suggested that Israel's concern over the long-term regional strategic balance played a major part in the decision to attack. According to this view, the Israelis fear that in the long run they will lose their conventional military superiority in the Middle East and that only their nuclear monopoly can ensure local preponderance. Thus, the Israelis could not allow a confrontation state to acquire atomic weapons of its own—a development that might offset Israel's nuclear advantage.¹⁹ It is difficult to know to what extent such thinking influenced the decision, however, since Israel has never made clear the role of nuclear weapons in its overall doctrine of

defense.²⁰ It should be noted, however, that the major proponents of the strike included men like Sharon, who believe neither in the inevitability of Israel's conventional decline nor in the usefulness of an Israeli nuclear deterrent.²¹

Whatever strategic rationale may have entered into Israel's decision to attack, the move probably sprang from more than a cold appraisal of the regional balance of power. Overlaying these calculations was a simpler emotion: the visceral fear of an atomic genocide. Inescapably, Israel embodies the memory of the holocaust: always present to the Israeli populace and their leaders is the thought that such a catastrophe could occur again. Five wars with Israel's Arab neighbors, whose incendiary rhetoric has often promised extermination, have done nothing to allay these fears. From this dread of another holocaust, which has obsessed Menachem Begin more than any other Israeli leader,²² has arisen a specific Israeli outlook encompassing the tendency to rely in matters of security on "worst possible case" analysis. Hence, when faced with a menace, at least some Israelis would rather overestimate than underestimate the threat.²³

Given this disposition, which appeared widespread in Begin's hawkish Likud government, the prospect of a nuclear-armed Iraq certainly seemed alarming. Israel, whose population is largely concentrated in one or two urban areas, is particularly vulnerable to nuclear attack: one or two atomic warheads could deal the country a mortal blow. Further compounding Israeli apprehensions was the fact that the first Arab country threatening to go nuclear was Iraq. By its rhetoric, if not necessarily by its deeds, Iraq had long been in the vanguard of the confrontation with Israel. Known for its support of various terrorist groups and its bitter denunciation of the Camp David peace process, Iraq had acquired a record of chilling statements. President Hussein had repeatedly refused to accept "that the monstrous Zionist entity conquering our land really constitutes a state." Commenting on a decision to boycott nations that have

embassies in Jerusalem, he also added: "Some people may ask if this decision is the best that can be taken. No, a better decision would be to destroy Tel Aviv with bombs."²⁴

On the other hand, Hussein had never tried to implement the latter policy, and his actual behavior in the Arab-Israeli conflict had been considerably more prudent than his rhetoric would suggest.²⁵ Moreover, it was far from evident that Hussein was about to acquire nuclear weapons, and, even if he were, that he would be reckless enough to use them against Israel, thereby inviting an equally devastating Israeli counterstrike upon Iraq.²⁶

In the decision-making process, Israeli fears and the propensity to rely on worst-case analyses seem to have prevailed. The advocates of the strike focused on the unreasonable, rather than the reasonable, aspects of Iraqi behavior, and thus even a limited prospect that Iraq might soon acquire a nuclear bomb became more of a risk than they were prepared to accept. Dismissing Hussein as a bloodthirsty lunatic and a *meshuggenah* (crazy person), Begin, for instance, became convinced that the Iraqis would not hesitate to attempt nuclear genocide. During the aftermath of the raid, in explaining his reasons for favoring the attack, he stated succinctly: "After the holocaust another holocaust would have happened in the history of the [Jews]. There won't be another holocaust in the [history] of the Jews." In their own explanations for the raid, other key decision makers reiterated this dread of a nuclear holocaust unleashed by an irresponsible Iraq. Sharon, for example, declared that "nuclear arms in the hands of a country like Iraq constituted a danger not only to Israel . . . but to the entire world." Similarly, Eytan explained that "nuclear weapons should not be in the hands of rulers such as those in Iraq," adding that for Israel the destruction of Osiraq "was a matter of life and death."²⁷

Other considerations may have influenced the timing of the raid, if not the decision itself. Israel's parliamentary elections were fast ap-

proaching, and although the Begin government had recently gained a slight lead in the polls, the outcome of the contest promised to be close. Under such conditions, it would hardly be surprising if certain decision makers also weighed the domestic gains a successful operation could provide. Convinced that the Iraqi nuclear program had to be stopped forcefully and without delay, Begin also knew that the Labor opposition held different views. Thus, the Prime Minister no doubt perceived that this might be Israel's last opportunity to check an ominous threat.²⁸

ISRAEL'S decision seems to have been largely influenced by the fear of another holocaust, the propensity to dwell on worst-case scenarios, and the particular circumstances of the moment. Paradoxically, however, it is questionable whether the country's long-term security was enhanced by the strike. An immediate consequence of the raid was to further strain Israel's relations with the international community. Most nations rejected Israel's contention that it had acted in self-defense, and the raid elicited a unanimous resolution of condemnation by the United Nations Security Council.

Of greater concern for Israel, however, was the generally negative reaction of its closest ally, the United States. Even though certain voices were sympathetic to Israel's fears, the overall American reaction was unfavorable. Many in the news media regretted the gap between the remoteness of the threat and the severity of the response.²⁹ Meanwhile, the raid complicated the Reagan administration's efforts to draw moderate Arab states into a strategic consensus against the Soviet Union. In the wake of the raid, these states were more likely to perceive Israel, not the Soviets, as the greater threat.

The short-term U.S. reaction was to join in the Security Council's condemnation of the raid and to suspend the delivery of American

warplanes to Israel. More serious, perhaps, was the probable long-term reaction. Many Americans tended to view the attack not as an isolated incident but as another episode in a disturbing sequence of events. Coming shortly after Israel's controversial foray into southern Lebanon in 1978, the annexation of the Golan, and the acceleration of the pace of Jewish settlements on the occupied West Bank (and soon followed by the full-scale invasion of Lebanon and the devastating siege of Beirut), the raid contributed to the growing perception that Israel has become an "irrational," "lawless" state. As the Israeli analyst Shai Feldman keenly observed:

The intimacy in American-Israeli relations can . . . be accounted for by the two countries common "Western" values and culture, as well as their shared commitment to democratic norms. Since the raid on Osiraq seemed to manifest a form of lawless behavior, the operation hurt the most sensitive nerves of America's support for the Jewish state. Rising doubts regarding Israel's commitment to the aforementioned norms and values would necessarily have a long-term effect on U.S.-Israeli relations.³⁰

Thus, the raid appears to have encouraged one of the greatest threats to Israel—its increasing international isolation. Simultaneously, the benefits that the raid provided for the country's security remain uncertain, for it is questionable whether the operation truly checked proliferation in the Arab world.

Even before the Israeli strike, numerous observers were convinced that the Middle East was on the verge of nuclearization, with several Arab states moving toward the nuclear threshold.³¹ Iraq was one of those states, and, without a doubt, the raid set Iraq's projects back at least several years. Beyond that, however, the event may actually have increased Arab motivations to acquire nuclear weapons, adding not only disincentives for regional proliferation but incentives also.

Certainly, by its destruction of Osiraq, Israel increased disincentives for proliferation in the Arab world. It is now clear to Israel's oppo-

nents that any attempt at nuclear arming is an invitation to attack. Indeed, Israel has since stated that "nuclear weapons must not be in the possession of Arabs" and that she is prepared to strike again, not necessarily against Iraq only.³² While the Arabs had acknowledged the possibility of such action in the past, it now has ceased to be simply a theoretical notion but has become a distinct probability.

Israel's action also may have created a greater Arab awareness of the instability that might ensue if an Arab power did acquire the bomb. Since Israel did not hesitate to launch an unprecedented attack against a nuclear facility that was merely a potential threat, the Arabs have good cause to wonder how the Israelis would react to a truly operational Arab nuclear force. The Arabs may conclude now that the prospect of a conventional or even nuclear Israeli strike against such a target has become much more credible, even though such an attack would be a major escalation in the level of violence in the Middle East. As a result, Arab interest in the nuclear option might conceivably have diminished.

Finally, the raid against Osiraq has resulted in new, practical obstacles to regional proliferation. By dramatizing the nuclear danger in the Middle East, the Israeli action prompted a number of nuclear suppliers to greater circumspection, making access to sensitive material and facilities more difficult. For instance, as a precondition to rebuilding Osiraq, France has insisted that the Iraqis accept the caramel fuel as well as additional safeguards on the reactor. In addition, foreign technicians may be somewhat more reluctant to work at nuclear sites so obviously susceptible to preemptive attack.³³

However, the effect of these disincentives should not be exaggerated. First, there is no guarantee that Israel can repeat its Osiraq success. As demonstrated in the October 1973 war, it is certainly not impossible for an Arab state to protect vital targets with an air defense network that is extremely difficult to penetrate.

Similarly, if Arab nuclear facilities were to be built in Algeria, Libya, or Saudi Arabia, they might prove to be beyond Israel's striking range. In fact, Hussein vowed after the raid: "If the Israeli planes return, they will not have a chance to attack important plants [again]." On another occasion, he added that the Arabs might place "critical links of their nuclear efforts in locations that are out of Israel's reach."³⁴

Likewise, to the extent that the Arabs have publicly discussed nuclear issues at all, they generally have seemed confident that the logic of superpower deterrence would apply also within the Middle East. Rightly or wrongly, they have tended to assume that a nuclearized Middle East would result in a stable "balance of terror" in which neither side would dare launch a preemptive attack.³⁵ There is no evidence yet that the Israeli raid has changed these perceptions. On the contrary, shortly after the raid, Jordan's King Hussein declared that an Arab bomb was an inevitable precondition of regional stability:

[In nuclear] armaments a certain equilibrium is necessary. If there is no equilibrium, there is no limit, and if there is no limit, the door is open for aggression. We all know that Israel has several atomic bombs Arabs should not be held for less intelligent than they are [Soon] Israel's atomic superiority will no longer exist.

In his own comments after the Israeli attack, Saddam Hussein voiced the same belief that the spread of nuclear weapons would actually help stabilize the Middle East. By matching Israel's nuclear weapons, he maintained, the Arabs would "secure and safeguard the peace," adding explicitly that a nuclear Middle East would mirror the nuclear balance between the superpowers. Elaborating on the reasoning behind his call for an Arab bomb, the Iraqi leader explained:

The same logic is used by the United States and . . . the Soviet Union I don't think the Soviet Union intends to use nuclear weapons against the United States or vice versa Yet both sides

continue to develop their military nuclear capabilities.³⁶

Lastly, the increased obstacles to proliferation may not prove insurmountable. Not all of the traditional nuclear suppliers have necessarily experienced the same change of heart as the French, and new sources of sensitive material and technology are becoming available. Already, such states as Argentina, Brazil, India, and Pakistan have the technical abilities to provide extensive assistance to an Arab nuclear program, and at some point one or several of them may also have the incentive to do so.³⁷ As the examples of India and Pakistan illustrate, the rapid dissemination of nuclear technology worldwide is making it increasingly feasible for a moderately developed but determined Third World nation to assemble a nuclear weapons program, drawing on its indigenous resources.³⁸

While the raid dramatized the Israelis' determination to prevent Arab access to nuclear weapons by every means available and perhaps placed new practical obstacles on the road to regional proliferation, the operation simultaneously increased the incentives for proliferation. One such incentive—not to be taken lightly in the Middle East—is the wish to efface a humiliating affront. Of central concern in the Arab world are the notions of honor (*sharaf*) and face (*wajh*), and the readiness to avenge humiliation has often been a wellspring of Arab behavior.³⁹ The Israeli action dealt a severe blow to the pride of the region. For the Arab nations, the raid signified that Israel was claiming a right of veto over technological developments within their very borders. In addition, the Iraqis' powerlessness in the face of Israel's military prowess revived painful memories of the Arabs' 1967 defeat. The leader of the Gulf Cooperation Council aptly summarized the mood of the area in the wake of the attack: "We are humiliated, insulted. We and the other Arabs have been treated as nonexistent human beings." Or, as the Kuwaiti press put it: "By penetrating the adjoining air space of the

Arab states and raiding Iraq, the Israeli air force has in reality penetrated the dignity of all the Arabs."⁴⁰

Not surprisingly, the Arab world reacted with angry defiance,⁴¹ and, if the past provides any clues to the present, no doubt yearned to avenge the insult. As a result, Arab interest in nuclear weapons may have increased. Not only is the Iraqi leadership likely to perceive an Iraqi bomb as a means of avenging the affront, but rulers throughout the Middle East now realize that the Arab leader who develops atomic weapons will become an overnight hero both at home and throughout the Arab world. Thus, for Arab leaders, the nuclear option may have gained in attractiveness. The Jordanian paper *Ad Dustur* emphasized this ominous implication in the wake of the raid:

If it is true that facing up to challenges resurrects nations . . . then we do not doubt that [the attack] will prompt Iraq and other Arab states to do the impossible to possess the nuclear weapons.⁴²

This propensity for "going nuclear" appears even more likely in view of a key set of perceptions that characterizes the Arabs' view of the world: a pervasive sense of insecurity, which produces, in turn, deep feelings of mistrust. In a penetrating analysis of Arab perceptions, John W. Amos has noted that Arab "images are permeated with an element of threat . . . stemming from . . . what might be called an escalatory perception of events." As a result, Arab political behavior displays extensive distrust and the tendency to expect the worst from any adversary.⁴³

Given these dispositions, the raid against Osiraq heightened Arab apprehensions in several ways. First, perennial Arab distrust ensured that what the Israelis perceived as defensive action was seen by the Arabs as an act of aggression.⁴⁴ Thus, for the Arab world, Israel's unprecedented attack against Osiraq represented an alarming new degree of escalation in Israeli belligerence, which was reinforced by rumors of Israeli support for an Egyptian drive

into Libya, Israel's increasingly hard line regarding the occupied territories, and the later, unprecedented Israeli invasion of Lebanon. In the words of Iraqi Foreign Minister Saddun Hammadi, for instance, the raid constituted "a qualitative change in the aggressor's policy" and indicated Israel's determination "to escalate [its] provocations with acts of armed aggression prior to launching a fullscale war in order to subjugate the Arab countries and impose full Zionist control over the whole Middle East."⁴⁵

Because the Arabs are convinced that Israel is a nuclear power,⁴⁶ the raid, in their eyes, also signified that Israel was asserting an exclusive right to nuclear weapons in the Middle East. Since the need of a nuclear monopoly for purely defensive purposes is open to doubt, the Israeli move could only cause heightened concern among Israel's ever-suspicious opponents, intensifying Arab fears that Israel's nuclear weapons might be intended for at least some aggressive purposes. Hence, the raid fostered not only fears of Israeli assertiveness in the region but growing alarm about the ultimate purpose of Israel's nuclear program. That Israel one day might exploit its monopoly to engage in nuclear coercion seemed increasingly credible to Arab leaders.

In the wake of the Baghdad strike, this fear of nuclear blackmail was voiced throughout the Arab world. Saddam Hussein spoke for many when he asked: "What would happen if the Israelis imposed conditions on the Arabs, they [the Arabs] did not accept them, and Israel used nuclear bombs . . .? What would happen to the Arabs and mankind under such blackmail?" Similarly, the Arab League denounced Israel's "policy of threats and nuclear blackmail," and Jordan's Prime Minister Mudar Badran proclaimed: "Keeping nuclear weapons in the hand of the Israelis and depriving the Arabs of them is tantamount to an invitation to the Arabs to surrender to Israel's will."⁴⁷ Given that the Arabs have relied predominantly on military power to ensure their security, their

reinforced belief that Israeli nuclear blackmail is possible is likely to encourage the view that the Arab world needs its own nuclear weapons to meet the Israeli threat.⁴⁸

Israel's strike may have encouraged regional proliferation in still one other way. Traditionally, the Arab world has been reluctant to confront the issue of nuclear weapons in the Arab-Israeli conflict. In the earlier stages of the conflict, the Arabs were confident that their superior numbers and resources would defeat the adversary ultimately, and they had no desire to give the conflict a nuclear dimension, which, if exploited by Israel, might enable the Israelis to offset the Arabs' natural advantages.⁴⁹ Later, as evidence accumulated to indicate that Israel had become a nuclear power, the Arabs were slow to acknowledge this development. Although some spokesmen did express strong concern, many in the Arab world seemed to ignore the matter of regional nuclear imbalance. It was as if they were unwilling to face up to the unfavorable reality that Israel's nuclear status portended.⁵⁰ But by taking out the Iraqi reactor and in effect boldly proclaiming their intention of enforcing a nuclear monopoly, the Israelis have forced the Arab world to address the problem and implicit dimensions of nuclear inferiority. Moreover, by dramatically revealing how much it fears an Arab bomb, Israel may have suggested to some of its foes a powerful new means of leverage in their struggle.

By humiliating the Arabs, encouraging fears of nuclear blackmail, and generally dramatizing the Arab world's nuclear inferiority, Israel's raid thus created strong incentives for regional proliferation—incentives that may outbalance the disincentives also brought about by the raid. One cannot conclude, of course, that the raid will inevitably lead to regional proliferation: any nation's decision to acquire nuclear weapons is highly complex, involving not only the balance of general incentives and disincentives to proliferate but also the particular domestic and international circumstances of its own government and people.⁵¹ Whether

the mix of these factors will prompt any given Arab nation to acquire the bomb remains to be seen, but, in part *because of* the Baghdad raid, proliferation seems more likely.

IN DESTROYING nuclear facilities that posed only a limited threat at the time of the attack, the Israelis were prompted by acute fears for survival and a traditional reluctance to take chances in matters affecting their security. Whether the attack enhanced Israel's security is

doubtful. By dramatizing the nuclear imbalance in the Middle East and encouraging Arab fears of nuclear coercion, the strike gave Israel's equally apprehensive opponents ample cause for concern and multiplied Arab incentives to develop an offsetting nuclear capacity. While ultimate results are still unknown, the raid illustrates the fear and reaction that characterizes the Middle East—a region now awakened to its uncertain nuclear future.

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Notes

1. Joseph A. Yager, editor, *Nonproliferation and U.S. Foreign Policy* (Washington: Brookings, 1980), p. 208.
2. George Amsel, Jean Pierre Pharabod, and Raymond Sene, "Rapport: Osirak et la Prolifération des Armes Atomiques" (Paris: Groupe de Physique des Solides, Université Paris VII, May 1981), reprinted in *Les Temps Modernes*, September 1981, pp. 375-413.
3. Ministry of Foreign Affairs and Atomic Energy Commission, *The Iraqi Nuclear Threat: Why Israel Had to Act* (Jerusalem, 1981), p. 9. Hereafter referred to as *The Iraqi Nuclear Threat*.
4. *Ibid.*, pp. 9-10. As opposed to gas graphite and large research reactors, both well suited for diversion of fissionable material, conventional power reactors (pressure water and boiling water reactors) are the least appealing to a would-be proliferator. Neither the uranium fuel they use nor the plutonium they normally produce are weapons-grade. To produce plutonium better suited for weapons production, conventional power reactors must be operated in a way that immediately reveals the proliferator's intentions. See Ted Greenwood, George W. Ratjens, and Jack Ruina, "Nuclear Power and Weapons Proliferation," in *Energy and Security*, edited by Gregory Treverton (Montclair, New Jersey: Allanhead, Osmun and Company, 1980), pp. 119-22, and Alexander de Volpi, *Proliferation, Plutonium and Policy: Institutional and Technological Impediments to Nuclear Weapons Propagation* (New York: Pergamon, 1979), pp. 21-25.
5. Steve Weissman and Herbert Krosney, *The Islamic Bomb: The Nuclear Threat to Israel and the Middle East* (New York: Times Books, 1981), pp. 91-93, 256-57. Iraq argued that changing Osirak's fuel required modifications to the reactor that could delay the project.
6. *The Iraqi Nuclear Threat*, p. 10.
7. While the Italian-supplied "hot cell" is a small facility that only processes gram quantities of plutonium, the Iraqis could have expanded the capacity of the laboratory easily by using technology available on the open market. Weissman and Krosney, p. 101.
8. Weissman and Krosney, p. 89; U.S. Congress, Senate Committee on Foreign Relations, *Hearings: The Israeli Air Strike*, 97th Cong., 1st sess., 1981 (hereafter referred to as *Senate Hearings*), p. 60; "President Saddam Husayn Statement to Cabinet," *Foreign Broadcast Information Service* (hereafter, *FBIS*), 24 June 1981, p. E-10.
9. On the role of nuclear arms programs in buttressing national cohesion, see Ernest W. Lefever, *Nuclear Arms in the Third World* (Washington: Brookings, 1979), p. 20. On Iraq's ambitions, see Serge Rondot, "L'Irak: une puissance régionale en devenir," *Politique Etrangère*, September 1980, pp. 637-51.

10. "Saddam to Rio de Janeiro *O Globo*," *FBIS*, 2 July 1981, p. E-10. For Iraqi fears of the Iranian program, see Shai Feldman, "The Raid on Osirak: A Preliminary Assessment," Tel Aviv University, Center for Strategic Studies, CSS Memorandum no. 5, pp. 5-6.
11. Amsel et al., pp. 378-87; *Senate Hearings*, p. 78.
12. Although it has not signed the Nonproliferation Treaty, France has pledged to respect its stipulations, which prohibit helping a nonnuclear nation acquire nuclear weapons. Ashok Kapur, *International Nuclear Proliferation: Multilateral Diplomacy and Regional Aspects* (New York: Praeger, 1979), p. 67.
13. *Senate Hearings*, p. 107.
14. Anthony Fainberg, "Osirak and International Security," *Bulletin of Atomic Scientists*, October 1981, p. 34; Hans Gruemm, "Safeguards and Tammuz: Setting the Record Straight," *International Atomic Energy Agency Bulletin*, December 1981, pp. 12-13; Christopher Herzig, "Correspondence: IAEA Safeguards," *International Security*, Spring 1983, pp. 195-97.
15. "How Long Would It Take for Iraq to Obtain a Nuclear Explosive after Its Research Reactor Began Operation?" Congressional Research Report in U.S. Congress, House Committee on Foreign Affairs, *Hearings: Israeli Attack on Iraqi Nuclear Facility*, 97th Cong., 1st sess., 1981 (hereafter referred to as *House Hearings*), pp. 88-90. According to some estimates, Iraq could have secretly produced up to 10 kgs of plutonium per year. See, for instance, *The Iraqi Nuclear Threat*, pp. 47-53. However, these calculations assume a reactor power of 70 megawatts thermal, whereas Osirak's capacity did not exceed 40 megawatts thermal. The only way the reactor might have achieved annual plutonium yields approaching 10 kgs would have been by abandoning the agreed-on program of research with the French and dedicating the reactor exclusively to plutonium production. Furthermore, in addition to irradiating targets within the reactor core, the Iraqis would have had to blanket the core with additional uranium targets, a highly visible operation in a pool-type reactor. Nevertheless, to produce such a yearly output of plutonium, the reactor would have required from 100 to 200 kgs of HEU fuel—far more than the French had agreed to supply over the same period. Telephone communications with Anthony Fainberg, Brookhaven National Laboratory, 4 and 18 March 1983; Gruemm, pp. 12-13; *House Hearings*, pp. 59-60.
16. Besides France, the other producers of plutonium are the Netherlands, the United Kingdom, the United States, and the Soviet Union (all signatories of the Nonproliferation Treaty) and the People's Republic of China and the Republic of South Africa

(which are not signatories). China's attitude toward nuclear proliferation is very responsible, however, and given the Republic of South Africa's close ties to Israel, it is unreasonable to assume that South Africa would assist an unsupervised Iraqi nuclear program. William C. Potter, *Nuclear Power and Nonproliferation: An Interdisciplinary Perspective* (Cambridge, Massachusetts: Oelgeschlager, Gunn and Hain, 1982), p. 75; Lefever, pp. 8-9; Yager, p. 225.

17. Albert Carnesdale in House *Hearings*, p. 49.

18. Amos Perlmutter, Michael Handel, and Uri Bar-Joseph, *Two Minutes over Baghdad* (London: Vallentine, Mitchell and Company, 1982), pp. 80-84; Weissman and Krosney, pp. 7-8.

19. Amos Perlmutter, "The Israeli Raid on Iraq: A New Proliferation Landscape," *Strategic Review*, Winter 1982, pp. 39-40.

20. Israel has never acknowledged its nuclear arsenal, although most experts, including those in the CIA, agree that Israel is a nuclear power. Lefever, pp. 64-71.

21. For the contending views of Israel's strategic and nuclear posture among the country's policy-making elite, see Uri Bar-Joseph, "The Hidden Debate: The Formation of Nuclear Doctrines in the Middle East," *Journal of Strategic Studies*, June 1982, pp. 205-27.

22. On the "holocaust syndrome," see for instance, Shlomo Aronson, *Conflict and Bargaining in the Middle East: An Israeli Perspective* (Baltimore: Johns Hopkins University Press, 1978), p. 353, and Michael Brecher, *Decisions in Israel's Foreign Policy* (New Haven: Yale University Press, 1975), pp. 333-35, 508, 514. For its influence on Begin, see Aronson, p. 339, and Perlmutter, "The Israeli Raid," p. 40.

23. Aronson, p. 83; Brecher, pp. 333-35; Dan Horowitz, "The Israeli Concept of National Security and the Prospects of Peace in the Middle East," in *Dynamics of a Conflict: A Reexamination of the Arab-Israeli Conflict*, edited by Gabriel Sheffer (Atlantic Highlands, New Jersey: Humanities Press, 1975), pp. 235-76.

24. *The Iraqi Nuclear Threat*, pp. 4-7; House *Hearings*, p. 106; Senate *Hearings*, p. 281.

25. Even before the Israeli raid, there were signs that Iraq was becoming less virulent on the Arab-Israeli issue. Despite the attack, this trend seems to continue. Senate *Hearings*, p. 65; Maamoun Youssef, "Iraqi President Acknowledges Israeli Need for 'State of Security,'" *Washington Post*, 3 January 1983.

26. For a cogent critique of the assumption that nuclear-armed Arab states would act irresponsibly, see, for instance, Shai Feldman, "A Nuclear Middle East," *Survival*, May-June 1981, pp. 111-12, and Steven J. Rosen, "A Stable System of Mutual Deterrence in the Arab-Israeli Conflict," *American Political Science Review*, December 1977, pp. 1373-74.

27. *FBIS*, 10 June 1981, pp. I-3-4; 11 June 1981, pp. I-4-7; 15 June 1981, p. I-11; Weissman and Krosney, pp. 19-21, 291.

28. Labor Leader Shimon Peres has stated that the nuclearization of the Middle East would not threaten Israel but would increase regional stability instead. Bar-Joseph, p. 213. One reason which the Begin government gave for the timing of the raid was that the reactor was scheduled to become operational ("hot") in July, and an attack beyond that point might have caused radioactive fallout, killing thousands. It is the consensus of the scientific community, however, that while an attack on an operational power reactor could produce such effects, the danger does not apply to a research facility. See Bennett Ramberg, "Attacks on Nuclear Reactors: The Implications of the Israeli Strike on Osiraq," *Political Science Quarterly*, Winter 1982-83, pp. 653-99.

29. See, for example, Anthony Lewis, "Living By the Sword," *New York Times*, 18 June 1981, and Richard Wilson, "Using Treaties Not Airstrikes to Halt Nuclear Spread," *Christian Science Monitor*, 24 June 1981.

30. Shai Feldman, "The Bombing of Osiraq—Revisited," *International Security*, Fall 1982, p. 134.

31. Bar-Joseph, p. 205; Henry S. Rowen and Richard Brody, "The Growing Nuclear 'Overhang' in the Middle East," in Yager, p. 177; Feldman, "A Nuclear Middle East," p. 107.

32. Israeli Prime Minister Begin and Chief of Staff Eytan, *FBIS*, 11 June 1981, p. I-7. Begin indicated that the Israelis would strike only at threatening facilities in "enemy" states, apparently excluding action against Egypt.

33. Edward Cody, "France Plans to Bar Weapons-Grade Fuel for Iraq's Reactor," *Washington Post*, 13 June 1982; Ronald Koven and Jim Hoagland, "Mitterand Says France Will Hold Iraq to Stricter Conditions on Any New Reactor," *Washington Post*, 18 June 1981. One French technician lost his life during the Baghdad raid, and reportedly a third of the Italian technicians working on the hot cells requested their repatriation after the attack. Feldman, "The Bombing of Osiraq—Revisited," p. 126.

34. *FBIS*, 2 July 1981, p. E-10; Feldman, "The Bombing of Osiraq—Revisited," p. 139.

35. Bar-Joseph, pp. 207-09; Lawrence Freedman, "Israel's Nuclear Policy," *Survival*, May-June 1975, p. 119; Steven J. Rosen, "Nuclearization and Stability in the Middle East," *Jerusalem Journal of International Relations*, Spring 1976, p. 7. Among recent Arab leaders, for instance, only the late President Sadat appears to have expressed grave misgivings about the destabilizing potential of a Middle East nuclear arms race. Perlmutter et al., pp. 34-35. In Western circles, however, the question of whether a nuclear Middle East would prove stable is the object of increasing debate. See, for instance, Rosen, "A Stable System of Mutual Deterrence in the Arab-Israeli Conflict," pp. 1367-83, and Yair Evron, "Some Effects of the Introduction of Nuclear Weapons in the Middle East," pp. 105-06, in Asher Arian, *Israel: A Developing Society* (Assen, Netherlands: Van Gorcum, 1980).

36. *FBIS*, 8 July 1981, p. F-15; 24 June 1981, p. E-3.

37. Brazil, India, and Pakistan already have small-scale nuclear cooperation programs with several Arab nations. On these points, see Rowen and Brody, "Nuclear Potential and Possible Contingencies," in Yager, pp. 203-37; Rodney W. Jones, *Nuclear Proliferation: Islam, the Bomb and South Asia*, Washington Papers, No. 82 (Beverly Hills: Sage, 1981), pp. 44-53; and Judith Perera, "Was Iraq Really Developing a Bomb," *New Scientist*, 11 June 1981, pp. 688-90.

38. De Volpi, p. 23.

39. John W. Amos, *Arab-Israeli Military/Political Relations: Arab Perceptions and the Politics of Escalation* (New York: Pergamon, 1979), pp. 25-26, 208-09; Morroe Berger, *The Arab World Today* (Garden City, New York: Doubleday, 1954), p. 90; see also Perlmutter, p. 34.

40. *FBIS*, 10 June 1981, p. C-3; 6 August 1981, p. C-1.

41. Saddam Hussein typified the Arabs' reaction of defiance: "The Arab nation is not a group of people that can surrender to aggression and blackmail. Rather, it is a great nation with a long history and glorious past. . . . Such a nation can in no way surrender and accept servitude on its territory." *FBIS*, 14 August 1981, p. E-2.

42. *FBIS*, 9 June 1981, p. F-3.

43. Amos, pp. 13, 27. On Arab mistrust and fear vis-à-vis Israel in particular, see also John Edwin Mroz, *Beyond Security: Private Perceptions among Arabs and Israelis* (New York: Pergamon, 1980), and Dale Tahtinen, "Implications of the Arab-Israeli Arms Race," *Journal of Palestine Studies*, Spring 1979, pp. 48-52.

44. Tahtinen, pp. 48-52.

45. Feldman, "The Bombing of Osiraq—Revisited," p. 140; *FBIS*, 15 June 1981, p. E-8. For similar perceptions of Israeli escalation throughout the Arab world, see, for instance, *FBIS*, 9 June 1981, pp. C-4, D-1, 2, E-3, F-1; 10 June 1981, p. D-3; and 12 June 1981, p. A-3.

46. Oz Chen, "Reflections on Israeli Deterrence," *Jerusalem Quarterly*, Summer 1982, pp. 26-40; Fuad Jabber, "A Nuclear Middle East: Infrastructure, Likely Military Postures, and Prospects for Stability," in *Great Power Intervention in the Middle East* edited by Milton Leitenberg and Gabriel Sheffer (New York: Pergamon, 1977), pp. 74-75.

47. *FBIS*, 24 June 1981, p. E-3; "Resolution of the Meeting of the

Arab League Council," 11 June 1981, quoted in *Journal of Palestine Studies*, Autumn 1981, p. 238; *FBIS*, 10 June 1981, p. F-2. For similar comments, see also *FBIS*, 15 June 1981, p. F-1, and 16 July 1981, p. E-3.

48. In a statement typical of many reactions throughout the Arab world, the Kuwaiti paper *Ar Ray al Am* wrote: "We want to manufacture an atomic bomb . . . what motivates us to call for the possession of this weapon is that Israel possesses it. By using this weapon and the most advanced American weapons, Israel wants to defeat and humiliate us. . . . This does not mean that we would use the bomb, only that we would prevent Israel from using it against us." *FBIS*, 23 July 1981, p. C-1. For similar statements, see Saddam Hussein, *FBIS*, 24 June 1981, p. E-10; *FBIS*, 16 June 1981, p. G-2; and *Joint Publication Research Service, Near East-North*

Africa Report, 16 November 1981, p. 20. On the Arabs' reliance on their military capabilities to ensure their security, see Paul (Fuad) Jabber, *Not By War Alone: Security and Arms Control in the Middle East* (Berkeley: University of California Press, 1981), pp. 11-12.

49. Robert E. Harkavy, *Spectre of a Middle East Holocaust: The Strategic and Military Implications of the Israeli Nuclear Weapons Program* (Denver: University of Colorado Monographs Series in World Affairs, 1977), p. 55.

50. *Ibid.*, p. 70; Paul Jabber, "The Nuclear Middle East: Will It Be Stable?" Unpublished paper presented at the University of Connecticut at Storrs, 21 March 1982.

51. On this point, see John J. Weltman, "Nuclear Devolution and World Order," *World Politics*, January 1980, pp. 169-93.

So long as you prefer abstract words, which express other men's summarized concepts of things, to concrete ones which lie as near as can be reached to things themselves and are the first-hand material for your thoughts, you will remain, at the best, writers at second-hand.

Sir Arthur Quiller-Couch
On the Art of Writing

SURPRISE FROM ZION

the 1982 Israeli invasion of Lebanon

MAJOR MARK G. EWIG

THE PALESTINIANS expected an Israeli attack on their positions in southern Lebanon; the 30,000-man Syrian force in Lebanon braced for possible confrontation with the Israelis. Despite warnings of an ex-



pected attack, the Palestinian forces fell to the Israelis in less than seven days. The Syrians lost more than eighty aircraft and twenty advanced surface-to-air missile (SAM) batteries, while the Israelis admitted losing only two aircraft. A major reason for the humiliating defeat of the Palestinian and Syrian forces in the June 1982 Israeli invasion of Lebanon was the achievement of political and military surprise by the Israelis. An examination of the background for this conflict and the role of surprise in Israeli military doctrine reveals how the Israelis achieved this surprise.

Israel's Preinvasion Military Situation

Three important milestones provided the backdrop for the 1982 Israeli surprise attack: the 1975-76 Lebanese civil war, the 1978 Israeli invasion of Lebanon, and the July 1981 cease-fire agreement between the Israelis and the Palestinians. The first milestone was signaled by the end of the Lebanese civil war, which left large numbers of Palestinian forces positioned in southern Lebanon. The Syrians, who had entered the civil war on the side of the Christians, maintained a large contingent of troops in Lebanon's Bekáa Valley, just east of Beirut. The Israelis reluctantly accepted this status quo.

The second milestone, which led to several important consequences, was the 1978 Israeli invasion of Lebanon. Following a Palestinian terrorist raid into northern Israel, the Israeli Defense Forces (IDF) launched an attack to clear Palestinian forces from a ten-kilometer strip inside Lebanese territory. Even though the invasion lasted only seven days and appeared to meet with limited success, the Israelis may have been forced to withdraw under pressure from the United States.

After the 1978 Israeli invasion, the Palestinians used their growing power to build an infrastructure in southern Lebanon as the increasing impotency of the Beirut government

became more and more apparent. Their acquisition of a territorial base and growing strength allowed the main Palestinian entity, the Palestine Liberation Organization (PLO), to shift from exclusively guerrilla tactics to fixed positions and tactics along more conventional military lines.¹

To protect the Palestinians and, perhaps more important, the Syrian Air Force in Lebanon, from Israeli air attacks, Damascus introduced advanced surface-to-air missiles into the Bekáa Valley in April 1981. Israeli Prime Minister Menachem Begin demanded the immediate withdrawal of these SAM-6s and the cessation of Syrian Air Force activity over Lebanon.² Even though the Israelis wanted to destroy the missiles, they eventually conceded to U.S. requests for restraint.

The third milestone came with the July 1981 cease-fire agreement. As secular fighting had increased among various Lebanese factions, Israeli air raids against Palestinian and Syrian forces had intensified. To prevent further escalation, the United States sent a special envoy, Philip C. Habib, who ultimately succeeded in negotiating a cease-fire agreement. Eventually, the Israelis argued that the PLO was taking advantage of this agreement to strengthen its position in southern Lebanon. Israeli officials noted that the Palestinian forces were equipped with long-range rockets and artillery capable of striking Israeli northern settlements.³ Tel Aviv stated that the buildup of these forces violated the cease-fire and further warned that any Palestinian cross-border attacks or terrorist attacks against Israelis anywhere were cease-fire violations. When an Israeli diplomat was assassinated in Paris in April 1982, the IDF called up reserve forces and moved troops along the Lebanese border. Many thought that an Israeli invasion was inevitable. Later in the month, when a single IDF soldier was killed in a land-mine explosion, the Israelis attacked PLO targets in southern Lebanon. In justifying its action, Tel Aviv charged that the soldier's death had been just one of more than 130

cease-fire violations since the July 1981 agreement.⁴ The stage was now set for the 1982 invasion that would be launched after the 3 June assassination attempt against the Israeli ambassador assigned to the United Kingdom.

Surprise and Israeli Military Doctrine

The Israelis are considered to be one of the contemporary masters of the art of surprise.⁵ As former Israeli General and Defense Minister Moshe Dayan said, "Israel must always try for surprise in one form or another."⁶ Israel cannot afford to be attacked. The necessity for using surprise in warfare arises from four important Israeli constraints: its long border with little strategic depth; its small population, dwarfed by its Arab neighbors; its comparatively meager economic resources; and its fear of direct superpower intervention.⁷

There are several reasons why Israel must achieve surprise in the context of these constraints. Above all, surprise is a force multiplier. Richard K. Betts argues that surprise nearly doubles a force's combat capabilities.⁸ Surrounded by hostile neighbors and lacking in strategic depth, Israel must achieve surprise and change the battlefield ratio by destroying, enveloping, or paralyzing large numbers of the enemy quickly. Such use of surprise also can reduce the duration of war and the possibility of involving nations outside of the immediate combatants. Thus, in both the 1956 and 1967 Arab-Israeli wars, the IDF used the advantages gained from surprise to decisively defeat numerically larger enemy forces.⁹ Conversely, as the 1973 war showed, Israel cannot afford to be the victim of a surprise attack without paying a heavy price.

Somewhat related, and another reason for using surprise, is that Israel must minimize its combat casualties. Israel's small population and democratic tradition render it vulnerable to manpower losses.¹⁰ As noted earlier, the death of even a single IDF soldier can trigger

serious retaliation. Since surprise gives an attacker a favorable 1:5.3 casualty ratio (versus 1:1.1 without surprise), surprise is an important part of Israel's political-military doctrine.¹¹

Surprise also builds on Israeli strengths. Intelligence services with superb capabilities give Tel Aviv vital information about its enemies. Not only does Israeli intelligence provide a means for misleading, misinforming, and confusing opponents about Israel's intentions and capabilities, but also it allows surprise attack plans to be nurtured in secrecy. Short interior lines of communication permit the IDF to shift forces rapidly from one front to another and to engage a neighboring enemy with minimum movement prior to attack. Finally, Israel's technically competent, highly motivated military offers the Jewish state the weapons of war necessary to carry out a surprise attack.

Surprise, in and of itself, is not important.¹² What is important is the impact that it has on its victim.¹³ The victim forms an estimate of his opponent's intentions and capabilities—the who, what, where, when, and how of an attack—aspects that the attacker can manipulate for advantage. In other words, to attain the optimal effect, an attacker must be prepared to exploit the battlefield gains and opportunities achieved through surprise.

To exploit surprise fully, Israeli strategic doctrine emphasizes offensive operations that seek quick, decisive, and unequivocal victory on the battlefield. This strategy uses indirect approach, deception, speed and mobility, and secrecy in order to obtain its objectives.¹⁴ Ultimately, doctrine, strategy, and objectives determine the composition, equipment, and tactics of the forces. When these elements are coupled with an effective intelligence organization, Israel possesses a force ideally suited to achieve surprise in warfare.

Political Surprise

While military surprise is very important, its effects are intensified when accompanied by

surprise on the political level. Political surprise involves an "unexpected international move that has a direct impact on one or more states."¹⁵ Clearly, the 1982 Israeli invasion of Lebanon fits this definition. A model developed by Michael I. Handel helps to explain why the Palestinians and the Syrians failed to anticipate the Israeli attack. Handel suggests that surprise occurs when barriers distort the clear perception of information which could provide warning. He identifies three major barriers that threw the Palestinians and the Syrians off guard: the conflictive environment (the international and regional background), the enemy (Israel), and self (the Palestinians and the Syrians).¹⁶

International attention on 6 June 1982 was not focused on the Israeli-Lebanese border. The British-Argentine conflict in the Falkland/Malvinas Islands was in the spotlight as the world braced for the expected British assault. Simultaneously, the United States and Europe were watching with great interest events related to President Reagan as he began an important trip to Europe on 3 June. In the Middle East, tensions resulting from the Iran-Iraq war, renewed unrest among the Palestinians on the West Bank, and Israeli-Egyptian negotiations concerning Palestinian self-rule dominated the news. Thus, even when tensions increased in early June along the northern Israeli border, many other areas were holding the world's attention. Had other events not been such a distraction, political pressures might have persuaded Israel not to invade.

Viewing events inside Israel, the Palestinians and the Syrians did not receive signals pointing toward an imminent invasion. Rather, Israeli Defense Minister Sharon's visit to Washington in late May raised speculation about the revival of the strategic cooperation agreement between Israel and Syria.¹⁷ Prime Minister Begin's impending visit to the United States, scheduled for late June, made military action seem even more remote, at least until after the Washington meeting. It seemed unlikely that Tel

Aviv would jeopardize relations with the United States. Meanwhile, within the Israeli Knesset (Parliament), a debate was continuing inconclusively on the wisdom of an invasion into southern Lebanon. Many northern settlers expressed public opposition to an attack, for fear that Palestinian retaliation would come before successful Israeli Defense Forces action. Even after the attempted assassination of the Israeli ambassador in London on 3 June, there was no perceived public clamor for Israeli action, especially a northward invasion. Consequently, the Palestinians and Syrians received signals that argued against an attack, particularly at that moment.

As for self-generated perceptual barriers, the Palestinians believed that there was no immediate danger of a full-scale invasion. Even after the three days (3-5 June) of Israeli air raids against PLO positions (in retaliation for the attack on their ambassador), the PLO response with cross-border rocket attacks was moderate—at least compared to the actions that had preceded the 1978 invasion. Even if an attack came, PLO leaders believed, the Israeli fear of casualties and possible U.S. pressure would limit the scope of the attack.¹⁸ Certainly, the Palestinians did not contemplate an attack designed to destroy the PLO as a military and political force. Such an attack would involve not only urban warfare in Beirut against the PLO headquarters and main Palestinian refugee camps but also certain combat with the Syrians—two aspects which could force Tel Aviv into a long and costly fight. Because of Palestinian adherence to these concepts, PLO leader Arafat reportedly was not even in Lebanon on 5 June.¹⁹

The Syrian situation was somewhat different. Damascus had pledged to support Palestinian forces in Lebanon in the event of an Israeli attack.²⁰ However, their troop deployments in Beirut and the Bekáa Valley, far away from any suspected invasion targets, allowed them to determine their level of involvement in any conflict. The Syrians were determined not to let the



Palestinians drag them into a fight. For two days after the attack began, Damascus appeared to accept Tel Aviv's repeated assurances that Israel's only objective was to push the Palestinians out of rocket range of the northern settlements.²¹ Somehow, Syrian SAM batteries and their nearly 30,000 troops seemed off-limits to an attack. Several people asserted that Syria may even have been "colluding with the Israelis against the Palestinians."²² What Damascus also obviously failed to grasp was that the purpose of the invasion might be to change the entire political landscape in Lebanon, an action which would mean an end to or diminution of the Syrian presence there.

Here, then, was a situation where the selective perceptions of both the Palestinians and the Syrians clouded their reactions to the observable political events. Even threatening statements by Israeli Defense Minister Sharon were ignored because they contradicted the preconceived notion that Israel could not afford to conduct a full-scale invasion. In the end, both Palestinians and Syrians failed to realize that the Israelis probably would never find a better moment to strike at the PLO and simultaneously change the unstable situation on Israel's northern border.

Military Surprise: Lebanon, 1982

When the Israelis launched their sudden attack into Lebanon, Palestinian surprise was due in part to "alert fatigue" or the "cry-wolf" syndrome.²³ This phenomenon results from the desensitization of an entity's warning capability because the threatened attack or event did not occur. On possibly as many as four occasions prior to the June attack, Palestinian forces predicted and prepared for the expected Israeli attack. Each time the attack never came.

The Israelis invaded Lebanon in 1982 to smash the Palestine Liberation Organization (PLO) both militarily and politically. Although mauled and dispersed, the PLO survived to remain an important part of the problems bedeviling peace in the Middle East.

It is not surprising, therefore, that the PLO saw the events in early June as a repeat of previous Israeli saber rattling. Arafat's presence outside of Lebanon on the day before the attack dramatized this point.

Perhaps a second reason for PLO surprise was that the Palestinians incorrectly assumed they had developed a deterrent to an Israeli invasion. Whether in the form of the expected military participation of Syria in the conflict or of the threatened massive rocket attack against Israeli settlements, they believed these circumstances constituted capabilities that might deter an Israeli strike.²⁴ When the Syrians did not respond and when the swiftness of the Israeli attack destroyed the PLO long-range artillery and rockets, the Palestinians realized their deterrence was chimera.

If deterrence failed, the PLO knew that Israel could destroy its infrastructure in southern Lebanon. Not only were the Palestinians outmanned, outequipped, and without a real plan of action, but they also were forced to structure their military preparations to fight either Israel or Lebanese enemies, or both.²⁵ The PLO's basic plan was to use its increased forces, the mobility of its rocket launchers, and its underground fortifications to inflict heavy casualties on any invading Israeli force. The Palestinians believed that any Israeli attack would mirror the 1978 invasion and ultimately allow them to restore their military infrastructure in southern Lebanon.²⁶ What occurred, however, was a blitzkrieg-like, combined arms operation by what Chaim Herzog calls "the best force fielded by Israel in battle to date."²⁷ Because of meticulous execution of plans by Israeli Defense Forces that used enhanced mobility through rear-area heliborne and amphibious operations, the Palestinian force, which could best be described as paramilitary, was easily defeated.

The Syrian forces, on the other hand, were not totally inferior to the Israelis and may have possessed the best military capabilities ever faced by the IDF. Nevertheless, the Syrians lost more than eighty aircraft, while Syrian SAM



Battlefield success turns on the exploitation of opportunities achieved through a combination of surprise, maneuver, deception, numerical or technological superiority, and a host of other factors. The Israelis scored impressive victories en route to Beirut, but when they stopped short of realizing their objectives, the war degenerated into a siege that devastated most of the city and cost many civilian casualties.



sites in the Bekáa Valley were destroyed easily by a brilliantly planned and executed Israeli operation that achieved technical and doctrinal surprise.

Until the 1982 invasion, Syrian SAM sites had been off-limits to Israeli air strikes. As a result, the Syrians may have concluded that the Israelis considered an attack on these batteries too risky. This mind-set psychologically disarmed the Syrians. With their opponents so disarmed, the Israelis used the advantages of their superb intelligence and their mastery of electronic warfare to smash the Syrian batteries in lightning-like attacks. In these actions, the Israelis masterfully employed remotely piloted vehicles not only to gather real-time intelligence data but also to serve as decoys just prior

to the real attack.²⁸ A wide array of intense Israeli electronic warfare operations confused and deceived Syrian communications, thus blinding Syrian SAM radar units. Once blinded, Syrian target acquisition and tracking radars were attacked and destroyed by Israeli aircraft using antiradiation missiles.²⁹ The missile batteries themselves, at this point virtually helpless, were then destroyed by cluster munitions.

The Syrians had either known about or seen most of the Israeli equipment and munitions in combat. The tactical and technical surprise came in the unique way the Israelis employed

the equipment and munitions against the Bekáa Valley SAM sites. The Syrians failed to anticipate the sometimes small doctrinal and technical changes that can be critical in ensuring victory on the battlefield.

Similarly, Syrian aircraft, reacting to Israeli attacks on their missiles, encountered scores of Israeli aircraft that were following a meticulous plan. This plan made superb use of Israeli intelligence combined with sophisticated electronic warfare and some of the world's best aircraft (F-15s and F-16s). As Israeli E-2C Hawkeye airborne warning aircraft tracked the Syrians from takeoff, Syrian pilots encountered continuous, formidable electronic countermeasures that deprived them of necessary ground control. Furthermore, Israeli integrated training had enabled Israeli pilots to master air-to-air tactics and the use of all-aspect mis-

French, Italian, British, and American peacekeeping forces could not keep the warring factions apart nor provide the kind of security required to sustain the government of Amin Gemayel. After the withdrawal of most peacekeeping forces, the Lebanese government turned to Syria for an accommodation.



siles, such as the AIM-9L Sidewinder. Because of their superior qualifications, the Israelis were able to knock scores of Syrian aircraft from the skies.³⁰ While Arab pilots have never achieved an aircraft kill advantage over the Israelis, the 0-82 (Syrian to Israeli) air-to-air combat kill ratio was unprecedented. As in the case of the destruction of the SAMs, the Syrians had failed to anticipate changes in Israeli technology and tactics. The results for the Syrians were surprise and inevitable defeat in the air.

SURPRISE, then, played a major role in Israeli military successes against the Palestinians and the Syrians. Preconceived notions gave the Arab forces a false sense of security. The international political situation in early June 1982 seemed to tell the Arabs that an Israeli attack was quite unlikely. PLO and Syrian planners also failed to anticipate that attacks, if they did come, would not be repeats of the limited operations that the Israelis had carried out in 1978. They did not realize that the Israeli goals in 1982 would be far more ambitious than previous Israeli objectives.

Militarily, both Arab forces knew that an

invasion was somewhat likely. The Israelis were poised along the border, and Israeli doctrine emphasized the use of surprise. However, the Arabs failed to understand that surprise is related to an attacker's intentions and accomplished by the timing, location, strength, style, and intensity of his attacks.³¹ The Palestinians knew the place of attack—their positions in southern Lebanon—but failed to anticipate other characteristics of the attack. When the deterrent failed, their military inferiority made them easy victims for the Israelis. Meanwhile, Syrian forces in Lebanon assumed incorrectly that they were to be spared, even after witnessing the full-scale attack against the PLO. They failed to understand that the Israelis were determined to change the political situation in Lebanon, and that this change involved the departure of the Syrians. Through small and innovative technical and doctrinal changes, the Israelis were able to destroy Syrian aircraft and SAMs with relative ease. In all of this, incorrect political assumptions created conditions that translated into political and military surprise and ultimately into an Israeli military victory in this stunningly successful 1982 invasion.

Borfink, Germany

Notes

1. Daniel Dishon, lecture at the United States Air Force Academy, Colorado, 19 April 1981, p. 1.

2. Marvin Howe, "P.L.O. Is on Alert in Lebanon," *New York Times*, 13 April 1982, p. A6.

3. David Shipler, "Israel Warns U.S. of Military Move If Diplomacy Fails," *New York Times*, 10 November 1981, p. A13.

4. David Shipler, "Israeli Border Areas Shelled after Raid on Palestinians," *New York Times*, 10 May 1982, p. A6.

5. Barton Whaley, *Stratagem: Deception and Surprise in War* (Cambridge: Massachusetts Institute of Technology, 1969), p. 81.

6. *Ibid.*

7. Yoav Ben-Horin and Barry Rosen, "Israel's Strategic Doctrine," Rand Corporation Collection R-2845-NA. Santa Monica, California: Rand Corporation, September 1981, pp. 5-9.

8. Richard K. Betts, *Surprise Attack: Lessons for Defense Planning* (Washington: Brookings Institution, 1982), pp. 5, 15.

9. Michael Handel, "Crisis and Surprise in Three Arab-Israeli Wars," in *Strategic Military Surprise: Incentives and Opportunities*, edited by Klaus Knorr and Patrick Morgan (New Brunswick, New Jersey: Transaction Books, 1981), pp. 115-36.

10. Ben-Horin and Rosen, p. 21.

11. Whaley, p. 193.

12. Betts, p. 40.

13. Whaley, p. 156.

14. Bard E. O'Neill, "The Defense Policy of Israel," in *The Defense Policies of Nations: A Comparative Study*, edited by Douglas Murray and Paul Viotti (Baltimore: The Johns Hopkins University Press, 1982), p. 384.

15. Michael Handel, "Surprise in Diplomacy," in *Intelligence Policy and National Security*, edited by Robert Pfaltzgraff, Jr., et al. (Hamden, Connecticut: Archon Books, 1981), p. 188.

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21. Chaim Herzog, *The Arab-Israeli Wars: War and Peace in the Middle East* (New York: Random House, 1982), p. 346.
22. *Ibid.*, p. 23.
23. Betts, p. 72.
24. Thomas Friedman, "Shaky Truce in Lebanon," *New York Times*, 13 April 1982, p. A5.
25. Yezid Sayigh, "Palestinian Military Performance in the 1982 War," *Journal of Palestinian Studies*, Summer 1983, pp. 4, 9.
26. "Mortal Wounding of the PLO?" *Economist*, 12 June 1982, p. 23.
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28. Paul Cutter, "ELTA Plays a Decisive Role in the EOB Scenario," *Military Electronics/Countermeasures*, January 1983, p. 136.
29. Charles E. Mayo, "Lebanon: An Air Defense Analysis," *Air Defense Artillery*, Winter 1983, pp. 22-23.
30. Paul Cutter, "EW Won the Bekaa Valley Air Battle," *Military Electronics/Countermeasures*, January 1983, p. 106.
31. Whaley, p. 213.

There is no greater aid to clarity than a discreet economy of words, providing, of course, that the right words are used. Roundabout phrases should not be used where single words would serve, and we should not clutter up necessary phrases with useless words.

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HOW SECURE IS NATO'S NORTHERN CAP?

MAJOR ROBERT E. RUSSELL

WESTERN policymakers and the media, in their assessment of the military balance between the North Atlantic Treaty Organization (NATO) and the Warsaw Pact, inevitably focus on the so-called Central Front—the area near the border separating West Germany, East Germany, and Czech-

oslovakia. While the balance of power in the Central Region is no doubt crucially important to the United States and its allies, the two European flanks also demand more than occasional attention. The Southern Flank, largely because of the well-known Greco-Turkish disputes, receives appropriate publicity occasion-





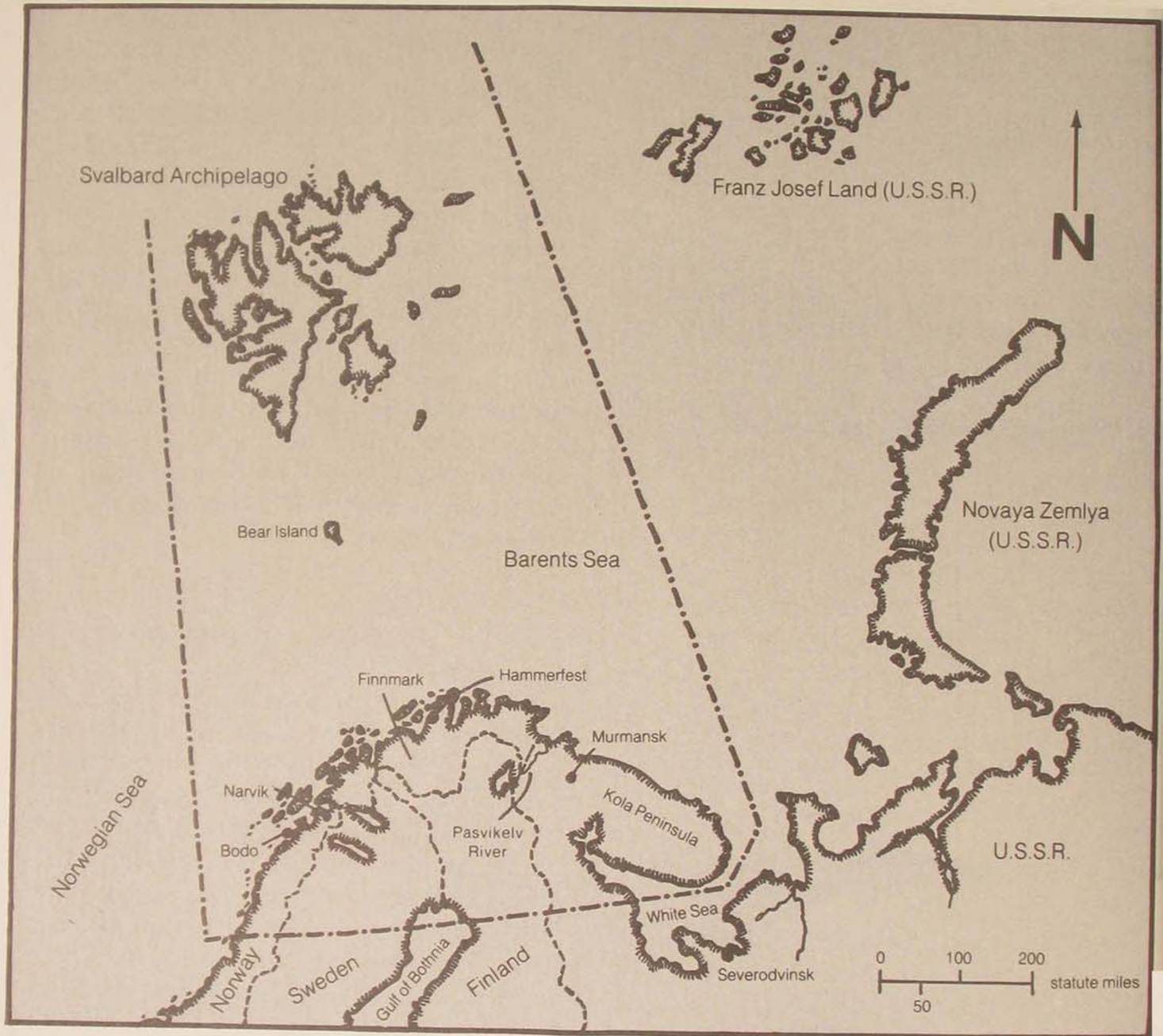
ally, but the Northern Flank, in which Norway is the key NATO member, has yet to receive all the attention it deserves.

Europe's "northern cap" is usually defined as the northern one-third of the Scandinavian countries (Norway, Sweden, and Finland), the Soviet Union's Kola Peninsula, and the Svalbard Archipelago in the Barents Sea north of Norway's mainland.¹ (See Map 1.) This area's critical relationship to the rest of NATO should not be overlooked. Its unusual geography, the size and strength of the Soviet military in the area, the Norwegian forces available to counter the threat, the destabilizing political problems of the region, and the ability of NATO to assist northern Norway—all combine to suggest that the situation in the northern cap is a potentially volatile one.

NORWAY'S northern location and unusual topography contribute to the country's security but, at the same time, present problems for rapid reinforcements by NATO. Norway, a large, elongated country, stretches over 1000 miles in length and ranges in width from 250 miles to slightly less than 4 miles at one point. (See Map 2.) Fifty thousand islands dot its 1500-mile western coast, which is lined with numerous narrow inlets that wind between extremely high banks or steep rock walls.² These inlets, called fjords, make amphibious landings extremely difficult or, in some cases, impossible. In western Finnmark, Norway's northernmost county, there are large mountains, many fjords, and numerous islands. Eastern Finnmark's gently rolling plain contains wide valleys with many lakes and soft marshes.³ Most of the year, without the use of special equipment, this area is nearly impassable to ground troops. Military maneuvers on this rough terrain are inhibited also by the cold and snow.

Low temperatures in the north could affect military operations significantly. Even in the summer, the temperature in Finnmark seldom

Map 1 Europe's Northern Cap

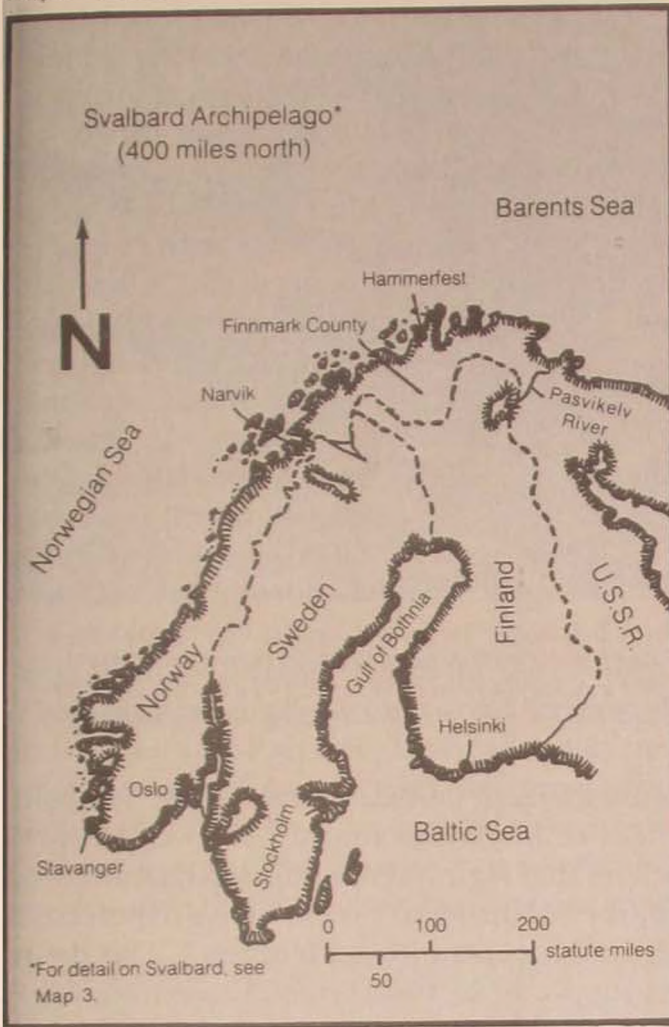


rises above 48°F.⁴ Finnmark averages 230 frost nights a year, with strong winds or heavy fog much of the time.⁵ Proper clothing and equipment are essential in this environment. The harsh landscape, snow and ice, and extremely cold temperatures make northern Norway a hazardous area in which to conduct military operations. As one previous commander of NATO's Allied Forces Northern Europe, Sir Walter Walker, even suggested, "The severity of winter operations, especially on the plateau of Finnmark, is such that survival could sur-

pass military operations in importance."⁶

The Svalbard Archipelago, including the island of Spitsbergen, is approximately 400 miles north of Norway's mainland. Desolate Svalbard remains the northernmost area of human inhabitation on earth.⁷ The whole archipelago lies much farther north than Alaska, and some of Svalbard's islands are within ten degrees of the North Pole. (See Map 3.) Yet despite this arctic location, the Gulf Stream (called the North Atlantic Drift there) keeps the water between Svalbard and Norway's mainland open

Map 2 Norway



for shipping and fishing.⁸ Even more important, this "warm" water allows access to the Atlantic Ocean for the Soviet Union's Northern Fleet, which is stationed on the Kola Peninsula at Murmansk.

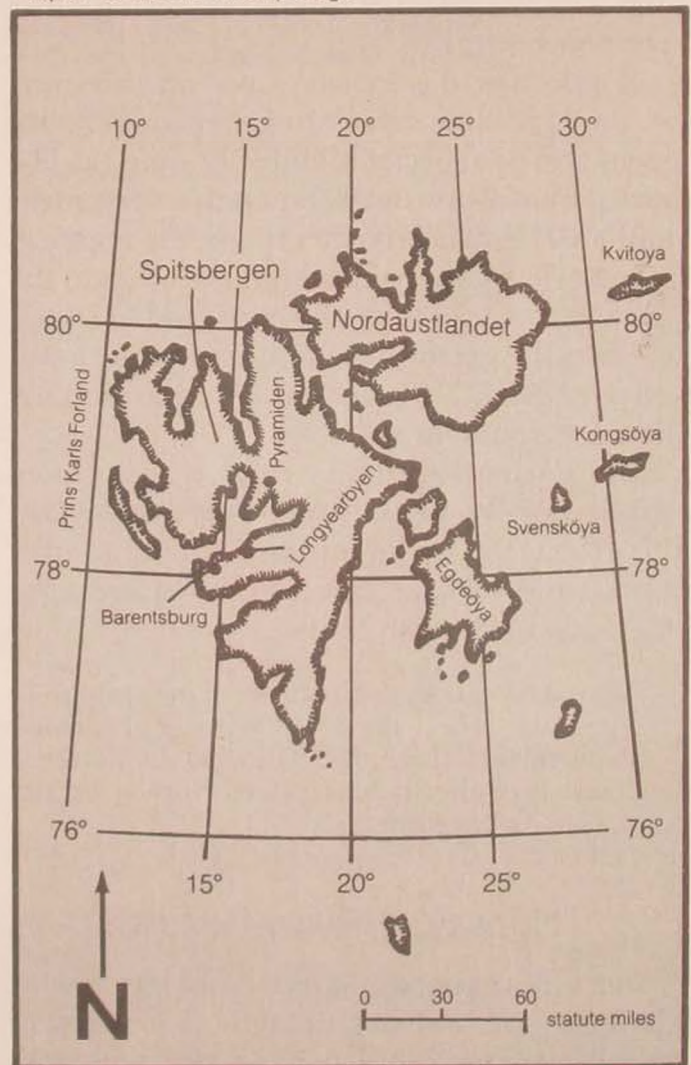
Soviet Strength in the Northern Cap

Since World War II, the population of the Murmansk Oblast—an administrative subdivision of a republic in the Soviet Union—and the Kola Peninsula has nearly tripled, now approaching one million people. Murmansk, a city of 300,000, has doubled its population since 1939 and is the world's largest city within the Arctic Circle.⁹ More significantly, a very

impressive concentration of military might in the Arctic region is situated on the Kola Peninsula, only 100 miles east of Norway's northern cape.¹⁰

Murmansk is the home of one of four Soviet naval fleets, the Northern Fleet, second in size only to the Soviet Pacific Fleet. It consists of approximately 500 surface combatants and nearly 175 submarines (more than 90 of which are nuclear-powered).¹¹ In fact, an estimated 50 percent of the Soviets' submarines are with the Northern Fleet.¹² The fleet receives its submarines from a huge shipyard near the city of Severodvinsk.¹³ Furthermore, the Soviets are modernizing this formidable northern force. The first Typhoon-class nuclear-powered bal-

Map 3 Svalbard Archipelago



listic-missile submarine is now with the Northern Fleet, and a second was recently launched at the Severodvinsk shipyard.¹⁴ The Soviets' first aircraft carrier, the *Kiev*, is also with the fleet, and two more will join the *Kiev* in 1985.¹⁵

Northern Fleet naval aviation has grown considerably also. An estimated 405 aircraft are assigned to the fleet.¹⁶ Of these, 125 are bombers and reconnaissance aircraft, and another 110 are antisubmarine aircraft and helicopters.¹⁷ Contributing further to the Soviets' growing air power in the Kola Peninsula are approximately 200 shore-based aircraft that support the Northern Fleet, plus 450 more in the Murmansk Oblast that are distributed over forty airfields. Modernization of this force is evident, with the new MiG-23 Flogger, MiG-25 Foxbat, and Tu-22M Backfire aircraft replacing older weapon systems.¹⁸

Supporting the Soviets' naval and air arms in the region are seven army divisions (70,000 men) and two special mobile divisions (25,000 men). In addition, a 2000-man naval regiment and a 4000-man brigade occupy the region.¹⁹ The Soviets have paid special attention to the peculiar needs of their northern ground forces, even to the extent of fielding a special troop carrier, the GT-T, designed to operate over marshy ground or snow.²⁰

Dr. Marian Leighton, who has spent more than twelve years studying Soviet strategy, believes that the Soviet military buildup on the Kola Peninsula far exceeds the requirements for a strictly defensive role:

The naval and air components of the buildup in particular reflect the Soviet posture of forward deployment, which, in relation to the northern flank, may already have placed Norway behind the Soviet front lines.²¹

Norway's Military Posture

Norway's national character provides a foundation for her military strength. A parliamentary democracy, Norway has a king who gov-



The NATO response to any Soviet incursion or attack on Norway would need to be rapid and decisive. Air power will play a key role in defending the Northern Cap.

erns the land and also serves as the symbolic head of her armed forces.²² Norwegians proclaim that their foreign policy is characterized by the "desire of the people to live in peace and friendly cooperation with others." This desire is supported by two themes: protection of human rights and preservation of democratic ideals.²³ Not surprisingly, then, Norway's military forces are defensive. Although Norwegian economic constraints dictate a small armed service, public opinion generally supports the military. All able men are required to serve in the military for twelve months if service is performed in the Norwegian army, or fifteen months if in the air force or navy.²⁴ Approximately 64 percent of Norway's forces are conscripts; therefore, with only 36 percent of her military force as "professional" servicemen (those inductees who stay on beyond their required time), Norway's military has a continual training problem.²⁵ Indeed, by the time the recruit becomes fully trained, he is eligible for release from active duty.

Norway's peacetime force consists of approximately 40,000 men. A recall of past re-

cruits would summon another 300,000.²⁶ Norway's reserves (members of the "Home Guard") number about 80,000, but since these men get only fifty hours of training a year,²⁷ their value in combat may be limited. As might be expected, most of Norway's active forces are based in the northern one-third of the country. One infantry brigade of 6500 men is in place there, and several more could be mobilized.²⁸ Also located in the north are one fighter squadron, one fighter-bomber squadron, a few reconnaissance and antisubmarine warfare aircraft, and a few naval vessels.²⁹ Of these northern forces, only the 500-man Norwegian Frontier Battalion mans the Norwegian-Soviet border.³⁰ Although reputed to be highly motivated, these men face a formidable threat to the east.

The Norwegian-Soviet border's natural features provide little protection for the country. The 150-mile-long border is marked for most of its length by the Pasvikelv River, which freezes solid in winter. A dam for a small hydroelectric station is located on a bend of the river where both banks are in Soviet territory. It is surely no accident that this particular dam was designed



Air Force F-15s, like these based in Germany, can operate in the extreme weather conditions typical of the Arctic climate.

Two F-15s based at Bitburg, Germany, and an F-4C fly in formation with a pair of Royal Norwegian Air Force F-104s during an exercise. The venerable F-104s are being replaced in the Norwegian inventory by highly capable F-16s.



wide enough to allow tanks to cross.³¹ Realizing that the Soviets would have little difficulty crossing the border in the north with considerable forces, Norwegians feel that maintaining stable political relations with the Soviet Union is an imperative.

Norway's Political Pressures

Although Norway joined NATO in 1949,³² its relationship to the alliance continues to be a "marriage of convenience rather than one based on passion."³³ Norway supports the West, but she attempts to reassure the Soviets of her military restraint by adhering to the following policies:

- No foreign troops or bases on Norwegian soil in peacetime.
- No nuclear weapons in Norway's territory in peacetime.
- No allied maneuvers in the county of Finnmark.
- No allied naval or air activity east of 24 degrees east longitude (near Hammerfest, Norway).
- Warsaw Pact observers invited to military exercises.
- Upcoming maneuvers announced, even if the 25,000-man threshold (of the Helsinki Accords) is not exceeded.³⁴

Norway's Foreign Minister asserts that these policies take "account of the Soviet Union" in Norwegian foreign policy and are unilateral "confidence-inspiring measures."³⁵ Norway believes that her allegiance to NATO and her attempt to avoid antagonizing the Soviets are both crucial to her security. Norwegians also believe that a balance of attitudes among her Scandinavian neighbors adds to the region's security.

Finland and Sweden continually receive pressure from the Soviet Union and are therefore pleased with Norway's membership in NATO. Sweden's nonalignment policy agrees with that of Finland, and Finland's geographical

location and military strength are viewed by Norway and Sweden as buffers between them and the Soviet Union.³⁶ This intricate balance of attitudes contributes to Norway's overall security and is important to Norwegians. Not fully confident of NATO's desire or ability to protect her, Norway contributes less money to NATO each year, preferring instead to use her limited funds to increase her own defense budget.³⁷ But only a few Norwegians believe that NATO's increasing inability to counter Moscow's growing harassment campaign brings diminishing returns on her investment in NATO and that, consequently, the benefits of membership in the alliance may not outweigh the risks.³⁸

Problems in the North

Whether or not Norway's membership in NATO is a "risk" is debatable, but continual pressures by the Soviets in the northern region may indeed drive NATO to provide the security that Norway wants for her participation in the alliance. Over the years, numerous Soviet actions in the northern cap have irritated Norway. If these annoyances continue, Norway may request increased assistance from NATO to ensure regional stability. Aware that such stability is critical to Norway's survival, NATO might respond with the additional assistance needed, which could range from political support to the stationing of equipment or even troops on Norwegian soil.

One area where continual political disagreements between Norway and the Soviet Union occur is the Svalbard Archipelago. The Spitsbergen Islands were placed under Norwegian protection by a 1920 treaty, which granted Norway and thirty-nine other signatories the right to exploit the area commercially. However, of the forty, only Norway and the Soviet Union have inhabited and explored the area, primarily for the purpose of mining coal.³⁹ The Soviet Union's Arktikugal Company has mining units at Barentsburg and Pyramiden,

and Norway's sole company is located at Longyearbyen. (See Map 3.) The coal production for the countries is nearly equal (450,000 tons monthly), despite the fact that there are 2000 Soviet coal miners and only 1000 Norwegian coal miners in the region. Why are there twice the number of Soviets as Norwegians to produce about the same amount of coal? The Norwegians contend that the Soviet Union has alternate reasons for the number of miners—that is, the Soviets do not really need the coal but use the mining foothold to maintain a presence on Spitsbergen for some future use.⁴⁰ Regardless of why they are there, at times the Soviets have antagonized the Norwegians in the area.

A few years ago, Aeroflot was granted use of the Svalbard Airport. Six Soviets are permanently based there to service only one monthly flight, while Norway adequately services her weekly airline flights with only one attendant. The Soviets then brought the wives of four of the attendants to live on the island, an action openly defying the established policy of not allowing the wives of the miners to live on the island. The 1920 treaty also prohibits militarization of the archipelago, yet the Soviets have established what some observers have called a military colony at Barentsburg, complete with electric fences and security guards. Also, the Soviets have begun basing their civilian version of the Mi-8 Hip attack helicopter on the island. Norwegians allege that these helicopters are fitted with armament racks for future military use. Finally, the Soviets persist in paying lump-sum taxes for the Russians living on Spitsbergen, rather than individual tax payments as the treaty specifies.⁴¹ These (and other) harassing actions are not limited to the islands; they extend to the Barents Sea.

A continental shelf extending from the land mass of Northern Europe to the north of Spitsbergen forms the seabed of the Barents Sea. Norway claims that the ocean floor is an extension of her sovereign territory, which gives her full economic rights to the entire shelf. The Soviets contend that the political boundary between the two countries should be defined as a "sector line"

drawn from the North Pole to the mainland's Norwegian-Soviet border, dividing the seas appropriately. (See Map 4.) This sector-line issue is closely related to the issue of the Disputed Area. Norway wants the region's political boundary determined by a "median line" drawn equidistant from sovereign lands. The difference in the area established by a sector line or a median line amounts to nearly 60,000 square miles of ocean, called the Disputed Area.⁴² Soviet ships taunt Norwegian shipping vessels in this area, and the Northern Fleet conducts exercises there. This Disputed Area issue continues to cause political unrest for the Norwegians, as does the issue of the Grey Zone.

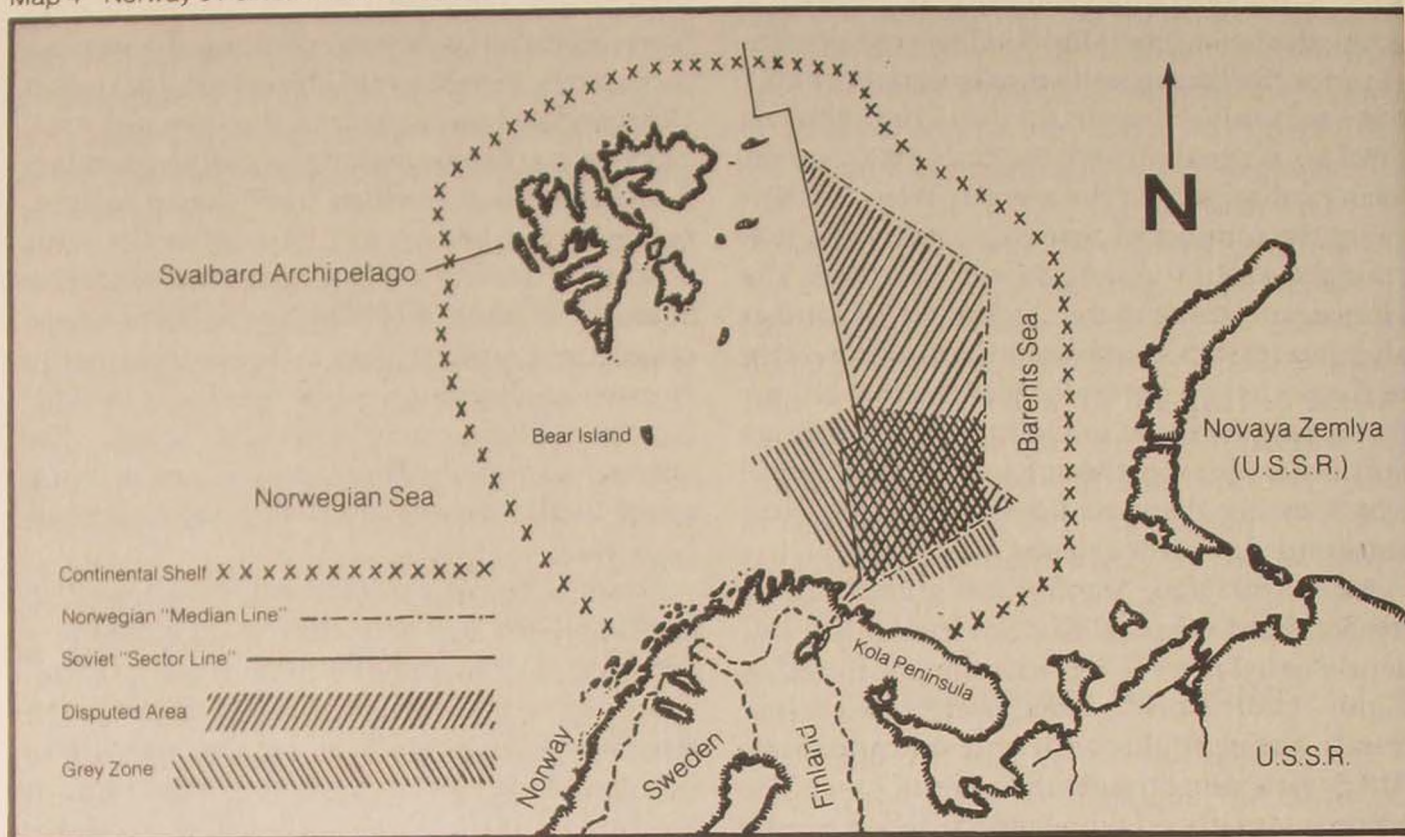
North of Norway's mainland is an area called the Grey Zone, set aside through bilateral protocol for Soviet and Norwegian fishing. Provisions of the protocol allow other countries licensed by Norway or the Soviet Union to fish in this area. However, in 1978, the Soviets turned away two British trawlers licensed by Norway.⁴³ Other similar incidents have caused increasing tension in the area, and observers speculate that it may be only a matter of time before an incident occurs in which Norway might need NATO's assistance. That is an important issue, as Norway questions NATO's ability to respond and support Norway's defense of the northern cap.

NATO's Ability to Defend the Northern Cap

Norway does have some valid concerns about NATO's ability to defend the northern region. Norway's policy of not allowing foreign bases on her soil hinders NATO's ability to keep the area secure or to ensure rapid reinforcements. Assuming that NATO agreed to support Norway militarily, what forces are available to deploy to Norway and what factors would make rapid, effective reinforcement difficult?

The Standing Naval Force, Atlantic (STANAVFORLANT), normally positioned off the northwestern coast of Europe, is the world's first permanent international naval

Map 4 Norway's Political Problem Areas



squadron and is tasked to defend the north Atlantic.⁴⁴ Five NATO countries, including Norway, provide forces for STANAVFORLANT.⁴⁵ However, the fleet is relatively small and does not compare in size with the Soviets' Northern Fleet. Supporting STANAVFORLANT in the defense of northern Europe is the Allied Command Europe (ACE) Mobile Force. Eight NATO nations provide these Central Region air and ground forces, which could deploy to northern Norway rapidly, provide a "show of force" demonstrating NATO's resolve, and counter a Soviet thrust until reinforcements arrive.⁴⁶ Essential to the makeup of the ACE Mobile Force are marine forces from several allied nations, including the United Kingdom, Holland, and the United States.⁴⁷ These forces must be deployed as early as possible because rapid seizure of Norway's northern cap by adversary forces would create severe difficulties for allied reinforcements seeking to reestablish NATO's security in the region. Related to this necessarily rapid decision to de-

ploy are questions regarding adequate reception facilities, prepositioning of stockpiles, and proper training for allied forces.⁴⁸

Host nation support and adequate seaports in the north are lacking; these matters need immediate attention.⁴⁹ Early positioning of supplies and equipment is crucial, and the land-based prepositioning program the United States Marine Corps is conducting currently in Norway is an excellent beginning.⁵⁰ However, although U.S. Marines train at two sites, the facilities, equipment, and support at these sites are inadequate. Recognizing that amphibious assaults need to be practiced constantly because of the difficult terrain and terrible weather, one Marine commander, who trained at these sites and then participated in several northern Norway exercises, expressed his concerns. For example, he indicated that amphibious landings were extremely difficult in the fjords and, even after landing, one unit progressed only thirty meters through deep snow after more than one and a half hours of intense effort because of the

lack of proper snow-removal equipment. He concluded that much better equipment is vital if the Marines are to be successful in northern Norway.⁵¹

THE security of Norway's northern cap is essential to NATO's security. The alliance cannot afford to let Soviet harassment of Norway and the growth of Soviet forces in the northernmost Norwegian areas go uncontested, as the political and military ramifications of Soviet gains in the northern cap are tremendous. For example, if the Soviets seized Spitsbergen and NATO did not help Norway, other alliance members would have serious doubts about NATO's effectiveness. Militarily, the Soviets would gain significant strategic benefits from this improvement of their geographic position: Backfire bombers could reach the entire United States refueled;⁵² SS-20 missiles could operate as intercontinental missiles against North America;⁵³ and the Northern Fleet would have unchecked access to the Atlantic and would be able to interdict sea lines of communication between America and Europe easily.⁵⁴ Thus, quite apart from concerns regarding the alliance, the United States has substantial strategic interests in the situation in northern Norway.

It is imperative that NATO remain vigilant and continue to monitor the area very closely.

NATO must continue to work with the Norwegian government to conduct more exercises in the area for the advantages these exercises offer in the realm of realistic training, to preposition crucial supplies, and to improve seaport facilities. The United States and other NATO members need to ensure that sufficient well-trained, well-equipped forces are available to deter Soviet encroachments and that these forces can be deployed rapidly if deterrence fails.

NATO bases its security in the north on a policy of deterrence designed to persuade the Soviets that an attack on Norwegian territory would incur costs greater than the potential gains they might obtain. However, Soviet analysts might decide that an attack on northern Norway would not mean automatic NATO involvement and could be limited to a Norwegian-Soviet confrontation. Accordingly, NATO must ensure that it can stand by its policy of reassurance.⁵⁵ To reassure its allies, NATO's future actions regarding the northern cap must be positive and convincing. The significance of maintaining security in this region and the resulting consequences if NATO ignores this strategic area cannot be overstated. One international relations expert emphasized the region's importance and placed the issue in the proper perspective when he observed: "World War III may not be won on the northern flank, but it could definitely be lost there."⁵⁶

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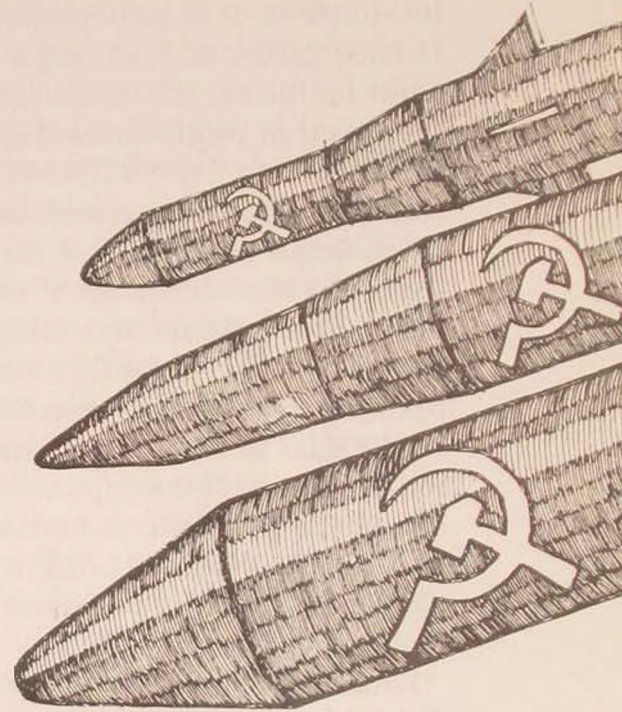
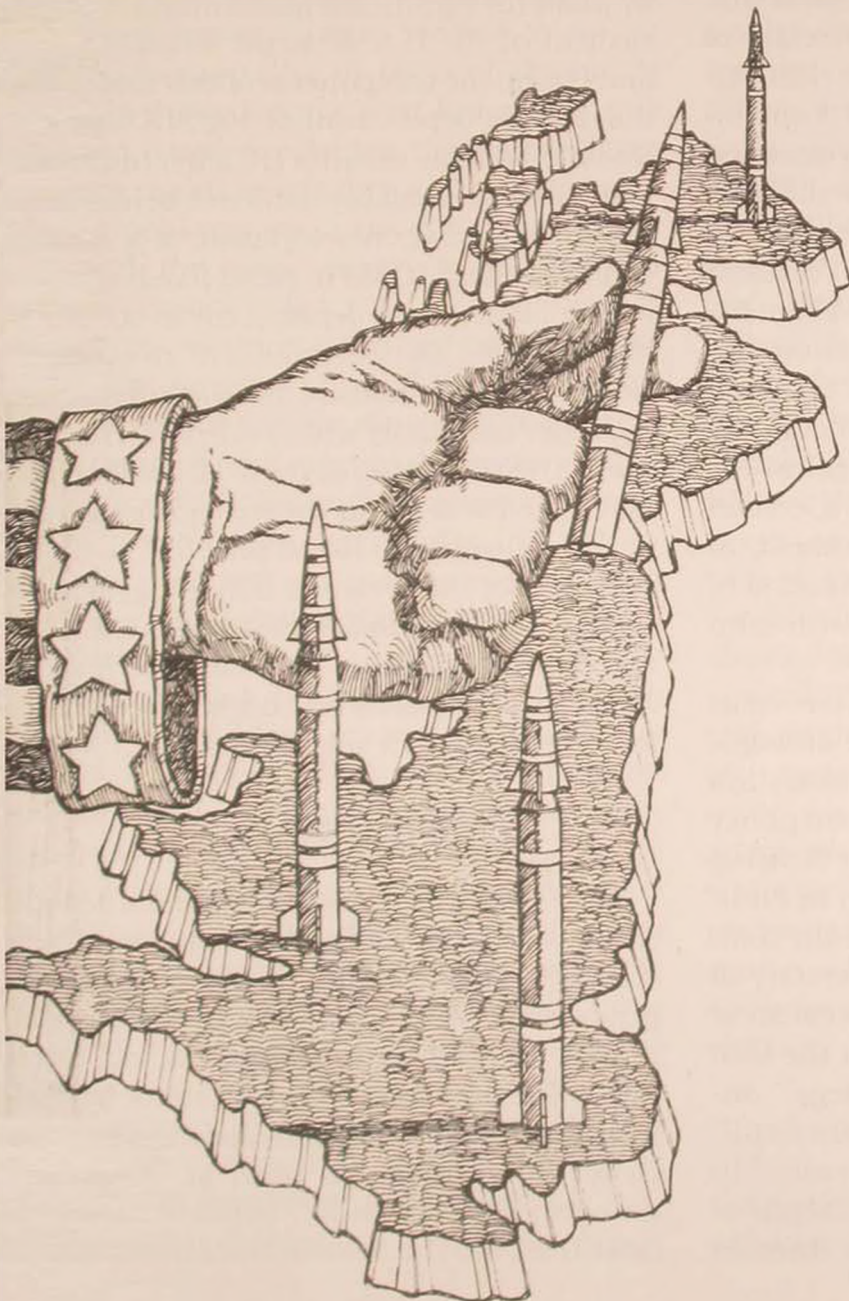
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WAR-FIGHTING DETERRENCE AND ALLIANCE COHESIVENESS

DR. STEPHEN J. CIMBALA

FOR many years, the United States has attempted to extend the deterrent power of its strategic retaliatory forces to dissuade Soviet attacks on our European allies, while improved Soviet strategic capabilities

have continued to call into question the viability of this "extended" deterrence. Recent developments in U.S. declaratory and force employment policies have raised new issues affecting NATO strategy and politics—issues that



are important to Western Europe's defense. Indeed, the evolution of U.S. strategy toward an amalgamation termed "war-fighting deterrence" may well work against our efforts to maintain alliance cohesiveness, on which credible defense depends.

U.S. Policy

Since 1974, American spokesmen have articulated changes in declaratory policy that emphasize the more selective and controlled use of strategic retaliatory forces if deterrence fails. This evolution has seemed both logical and inevitable to U.S. policymakers. Secretary of Defense James R. Schlesinger made clear our desire for increased flexibility in 1974. Explaining the meaning of National Security Decision Memorandum 242 (NSDM-242), he outlined three principal components of this search for increased flexibility.¹ First, the U.S. President should have a wide range of choices about using nuclear weapons, retaining escalation control at any level of conflict. Second, targeting policy should emphasize more explicitly the capabilities to retaliate selectively against the military forces of the opponent. Third, certain categories of targets should be withheld, at least initially, to make possible termination of the conflict on favorable terms and with minimal collateral damage.²

Although the Carter administration came into office committed to improved strategic arms control agreements, that administration continued the evolution in employment policy toward more credible selective war-fighting options. The official pronouncement in Presidential Directive 59 (PD-59) certified the commitment of President Carter and Secretary of Defense Harold Brown to the improvement of selective counterforce capabilities in the U.S. arsenal.³ The "countervailing strategy" announced by Brown had other important implications. The political and military leadership of the Soviet state would be explicit targets of selected nuclear attacks designed to threaten

the survival of the political system in the post-attack environment.⁴ The Carter administration also sought improvements in the survivability and endurance of the command, control, and communications (C³) required to ensure that U.S. strategic retaliatory forces could execute these more calibrated war-fighting missions.⁵

The Reagan administration has continued the emphasis of its predecessors on the development of selective retaliatory options and improved strategic command and control. The Reagan program has been accompanied also by plans for significant modernization of each element of the U.S. strategic Triad. In summary form, the components of this modernization are: (1) deployment of 100 MX intercontinental ballistic missiles (ICBMs) in Minuteman silos, presumably hardened beyond present standards; (2) development of a smaller, single-warhead ICBM in either fixed or mobile basing modes, with deployment to occur during the 1990s; (3) deployment of an estimated twenty Trident ballistic missile submarines, equipped eventually with Trident II (D-5) missiles; (4) introduction of the B-1B bomber force to replace the B-52s in the strategic penetrator mission during the 1980s, plus follow-on deployment of the advanced technology bomber (the so-called Stealth bomber) during the 1990s; and (5) deployment of thousands of nuclear-armed cruise missiles on bombers, surface naval craft, and attack submarines.⁶

NATO Strategy

Since 1967, NATO has been committed to a declared strategy of flexible response. To be successful as a deterrent, flexible response depends on the coupling of NATO conventional, theater nuclear, and strategic nuclear forces into a deterrent spectrum that cannot be challenged at any link. In reality, however, the basis for the concept was never as viable as it sounded. The "flexibility" in flexible response came from the U.S. reassurances that, if neces-

sary, the United States could respond to attacking Soviet conventional forces by threatening and perhaps using limited nuclear strikes against those forces. NATO confidence in U.S. willingness to initiate nuclear war in order to defeat conventional aggression has been weakened by several factors.

First, the improvements in Soviet strategic forces during the 1970s implied a potential first-strike capability against American ICBMs. Although the United States could still suffer such an initial attack and retaliate against Soviet society, it could not credibly threaten Soviet silos in the same way. Thus the balance of land-based strategic forces seemed to tip, at least psychologically, in favor of the Soviet Union by 1980. Among West Europeans, this situation raised doubts that the United States would or could come to their aid by escalating a conventional war into a nuclear one.

Second, the evolutionary developments in U.S. declaratory policy (i.e., the trend toward selective counterforce targeting) raised the concern of Europeans, who felt that credible deterrence of war in Europe should be based on a crude rather than a surgical American retaliatory policy. Selective nuclear options and calibrated war-fighting capabilities implied an ability or willingness to confine nuclear war to Europe while isolating the American and Soviet homelands.

Third, the lack of confidence in American strategic capabilities, relative to those of the Soviets, led to demands to meet Soviet theater nuclear force improvements with NATO forces based in Europe. Thus was born the "572" decision to deploy 464 ground-launched cruise missiles (GLCMs) and 108 Pershing II missiles in NATO countries, beginning in December 1983. The deployments were part of a "twin track" decision to begin negotiations with the Warsaw Pact on the reduction of intermediate nuclear forces (INF). The principal NATO concern in this regard was the large number of Soviet SS-20 intermediate-range ballistic missiles (IRBMs) deployed in the western Soviet

Union since 1977, numbering about 250 by 1983.⁷

While the United States intended the Pershing II and GLCM deployments as coupling for theater and strategic systems to strengthen deterrence and European confidence, unintentionally the deployments coupled Soviet protests about the buildup and European nuclear peace/nuclear freeze movements. The results were stalled INF negotiations with the Soviets, plus public opposition in Europe to the proposed NATO deployments, which highlighted differences in NATO strategy.

The simple truth is that NATO strategy depended on a credible threat to escalate to strategic nuclear war between the superpowers at the moment most favorable for the United States. This "escalation dominance" was now missing, and it was not likely to be restored in the near future. Actually, the 572 deployments had a more political purpose than a military one. Their operational military contribution beyond the existing capabilities of U.S. strategic systems was not clear even to experts.⁸

NATO strategy also suffered from conventional force imbalances relative to those of the Warsaw Pact. Although the conventional weaknesses of NATO can be overstated, analysts seemed to agree that the Soviet/Pact forces would outnumber NATO on many critical indicators at the outbreak of war. And these numerical advantages in tanks, artillery, and aircraft might be complemented by the advantage of surprise.⁹ It seemed apparent that NATO could not guarantee containment of a Soviet attack with conventional forces for very long, while simultaneously the U.S. nuclear guarantee was more in doubt. Thus, the flexible response policy designed to strengthen European confidence appeared increasingly unconvincing.

NATO Politics

American declarations of intentions and capabilities for selective strategic warfighting

have aroused political opposition in Europe, and the opposition groups, in some cases, include influential elites needed to implement NATO strategy. Belgian and Dutch leaders are wary of the 572 deployments, in part because of what they perceive as Reagan administration war-fighting rhetoric. Opponents of West Germany's Christian Democratic government (such as key Social Democrats), who may take power before the 572 deployments are completed, have demanded greater efforts at INF negotiations as an alternative to deployments. British Prime Minister Margaret Thatcher, who supported the deployment timetable, nevertheless demanded a British veto over the firing of nuclear-armed GLCMs from British bases.

To the extent that discussion of war-fighting strategies makes the probability of war seem higher or the consequences more devastating, should deterrence fail, it also engenders opposition in Europe. Fears run both ways and are not always consistent, but they are potent. Because the discussion of improved war-fighting capabilities sounds belligerent, Europeans fear that a higher probability of war is developing. But they also fear that Western unwillingness to plan for limited nuclear war may invite the Soviets to try an attack on favorable terms. NATO, as a coalition, not only would be hard pressed to obtain nuclear release in time to rectify a Soviet surprise attack but also would probably be incapable of providing successful resistance without escalating to U.S.-Soviet central war.¹⁰

Europeans note that American critics too have questioned whether changes in declaratory policy have been matched by improved U.S. capabilities for nuclear warfighting. In fact, American analysts have questioned

whether the "limited nuclear options" and "countervailing strategy" assertions offer anything more than flexible targeting, which is not all that new anyway.¹¹ If war-fighting deterrence is perceived as more shadow than substance by American analysts, it can hardly be convincing on the other side of the Atlantic. Europeans may be correct to be skeptical. We may indeed have begun the 1980s with the rhetoric of selective nuclear warfighting but without the capabilities. On the other hand, if we succeed in developing further capabilities, we dissuade the Europeans from increasing their budgets for conventional defense. If the United States is more willing to initiate limited nuclear strikes against Soviet conventional forces because the capacity for this kind of "battle management" has improved significantly, why should Europeans spend more money for non-nuclear forces?

THE ARRIVAL of war-fighting deterrence is as disconcerting as it appears to be inevitable. It seems self-evident to American planners that the United States needs improved war-fighting capabilities for credible deterrence in an age of strategic parity. But the more refined and calibrated these capabilities become, the more they threaten Europeans with "limited" (from our perspective) nuclear war, and the more irrelevant European conventional commitments may seem to them. There is no way out of this dilemma other than explaining our policies much better than we have thus far. If the Soviets can be deterred only by a new version of "flexible response" in which the "flex" is now intratheater nuclear warfighting, our NATO allies must understand this as we do. Otherwise, we have a coalition with no strategy.

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7. Dr. N. F. (Fred) Wikner, "A Balance of Theater Nuclear Forces: Can We Count? Where Are the Reloads?" *Armed Forces Journal International*, May 1983, pp. 92-101.

8. Colin S. Gray, *Strategic Studies: A Critical Assessment* (Westport, Connecticut: Greenwood Press, 1982), p. 86.

9. Richard K. Betts, *Surprise Attack: Lessons for Defense Planning* (Washington: Brookings Institution, 1982).

10. Jeffrey Record, *NATO's Theatre Nuclear Force Modernization Program: The Real Issues* (Cambridge, Massachusetts: Institute for Foreign Policy Analysis, November 1981).

11. The case that flexible targeting has been added to an unrevised "mutual assured destruction" doctrine is argued in Keith B. Payne, *Nuclear Deterrence in U.S.-Soviet Relations* (Boulder, Colorado: Westview Press, 1982).

Samuel Eliot Morison Prize

The American Military Institute (A.M.I.) is pleased to announce the Samuel Eliot Morison Prize to be awarded in recognition of the most outstanding scholarly contribution to military history in 1984. The winner will receive a medal and a cash award of \$100.00.

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The address of the Awards Committee is:

Professor Archer Jones
Department of History
North Dakota State University
Fargo, ND 58105



THE DANGER OF NUCLEAR

DIPLOMATIC DECAPITATION

DR. HOWARD TAMASHIRO

PERHAPS the most dramatic element of President Reagan's strategic FY 1983-87 five-year program involves the upgrading of U.S. command, control, and communications (C³) capability. Key military leaders fear that command, control, and communications in a nuclear war may be the Achilles' heel of U.S. strategic forces.¹ Recent reports on strategic false alarms and the dangerously obsolete North American Air Defense (NORAD) and Worldwide Military Command and Control System (WWMCCS)²—the core of our strategic defense C³ architecture—have heightened these fears.

To meet this threat, the Reagan administration plans to spend about \$20 billion on C³ upgrading. Besides replacing obsolete systems, this massive C³ spending is part of a larger, retailoring program designed to give the United States the capability to, in Secretary of Defense Caspar Weinberger's words, "conduct a prolonged nuclear exchange over a protracted period."³

However, there is a deeply disturbing asymmetry about this new C³ interest. All talk centers on military uses—i.e., battlefield intelligence, target acquisition, strategic systems con-

trol, electronic warfare, satellite defense, etc. Little attention is directed toward diplomatic C³ needs, which are at least as important as military ones. Outside the context of a total war, negotiations in some form are inevitable following the outbreak of war, and such negotiating assumes a survivable, diplomatic C³ system, which U.S. planners appear to be ignoring. This oversight is especially puzzling for an administration that covets a limited nuclear war-waging capability.⁴

Believers in limited nuclear war assume that political gains in such a setting are achievable, which implies that combatants will be able to stop nuclear fighting in a timely fashion. And this, in turn, assumes survivable C³ links for negotiating and truce implementing. Moreover, continuous communications between combatants may provide strong incentives to control escalation pressures, a necessary ingredient in all limited war scenarios. As former Secretary of Defense James Schlesinger observed in 1974 Senate hearings:

If we were to maintain continued communications with the Soviet leaders during the war, and if we were to describe precisely and meticulously the limited nature of our actions, including the



NORAD



WWMCCS

desire to avoid attacking their urban industrial base, . . . political leaders on both sides will be under powerful pressure to continue to be sensible.⁵

But one need not be a believer in limited nuclear war in order to see the need for diplomatic C³. If any nuclear war erupts, it is vital that fighting stop as soon as possible before all control is lost, which again requires a survivable, diplomatic C³ capability.

HOW vulnerable are our diplomatic C³ links in nuclear war? While much of the literature in this area is classified, the public material is not reassuring. To assess this vulnerability, we must consider at least two levels of diplomatic communication: leader-to-leader links and leader-to-subordinate links.

The major leader-to-leader link between the superpowers is the telecommunications hot line (MOLINK) joining Washington and Moscow. It is the most conspicuous, official effort to date for coping with the problem of war termination. But while it has proved invaluable for handling international crises, MOLINK's survival in a nuclear context is doubtful for two basic reasons. First, both the Washington and Moscow areas will be high-priority targets. Second, the long-range communication elements in MOLINK are fragile and easily could become incidental victims of nuclear strikes aimed at other nearby targets. The four ground stations, terminals, and telephone cables for MOLINK are all unhardened. The system's large dish antennas at Fort Detrick, Maryland, would probably collapse if exposed to as little as 5 pounds per square inch (psi) blast overpressure. MOLINK's satellites are unhardened and could be knocked out easily by exoatmospheric explosions. In short, as noted by former Secretary of Defense Donald Rumsfeld in 1977, "the system is not designed to survive a direct attack."⁶

Leader-to-subordinate links are no less vulnerable to nuclear effects. In the United States,

the Worldwide Military Command and Control System is *the* command and control system used, either directly or indirectly, by *all* government departments in a crisis. However, failures in the WWMCCS have cast serious doubts about its reliability. These failures center on (but are not confined to) the Honeywell 6000-series computers, which are the heart of the WWMCCS currently. For example, in a 1977 exercise, Prime Target, the WWMCCS computers were linked to computers of the U.S. Atlantic Command (LANTCOM), European Command (EUCOM), Readiness Command (REDCOM), Tactical Air Command (TAC), and the National Military Command Center (NMCC). EUCOM tried to get or send data through the computer network 124 times but failed 54 times because of "abnormal" computer shutdowns; LANTCOM tried 295 times, with 132 failures; TAC tried 63 times, with 44 failures; and REDCOM tried 290 times, with 247 failures (i.e., a success rate of 15 percent). Overall, the WWMCCS worked only 38 percent of the time.⁷ Bad planning and the procurement of incompatible data processing equipment are the main reasons for these problems. The military is now trying to correct and upgrade the WWMCCS.

Compounding these design problems is the danger posed by electromagnetic pulse (EMP). EMP refers to electromagnetic disturbances produced by a nuclear blast, which can destroy electronic components and circuits.⁸ Some military C³ links are now being EMP-shielded, but the process will not be completed for many years. Moreover, experts themselves disagree on the effectiveness of shielding.⁹

Other radiation effects from nuclear blasts that could disrupt C³ links include both atmospheric ionization and transient radiation effects on electronics (TREE). Ionization can interfere with certain very-low-frequency transmissions. TREE, which refers to the impact of x-rays, gamma rays, and neutrons, can destroy solid-state devices and circuits.¹⁰ These threats render military C³ capabilities highly prob-

lematical in a nuclear context.

The effects of EMP, TREE, etc., have produced much concern within military circles. The literature in this area focuses almost exclusively on the problem of preserving *military* leader-to-subordinate links, however. Unfortunately, the vulnerabilities of *diplomatic* C³ links are far more acute than those of the military.

In a nuclear context, the Department of State will need to depend on the trouble-plagued WWMCCS, in part because State's non-WWMCCS communications are even more fragile than the military's systems. Much of State's telecommunications depends on civil systems that are largely unprotected and, hence, TREE- and EMP-vulnerable. Some hardening of existing telephone lines and circuits is now going on, but U.S. diplomatic communications are still extremely delicate.

Perhaps the worst problem facing the Department of State comes from the direct, physical damage produced by nuclear blast. Most of the 235 U.S. embassies and missions worldwide are located in vulnerable, urban areas. Given the Soviet Union's present military doctrine, which calls for immediate C³ targeting,¹¹ the survival time for Department of State telecommunications is problematical. Hardening alone will not give us a survivable, diplomatic C³ network. When one considers that survivability in a protracted, nuclear war means surviving not just one strike, but *multiple* strikes, then hardening as a complete solution seems futile.

Neither does satellite technology now in place offer a viable answer to C³ vulnerability. Certainly, satellites are playing an increasingly crucial role in command and control. They provide the most important communications mode between Moscow and Washington (the hot line), and they link national command authorities with their respective military forces. But satellites, together with their ground stations, are very vulnerable to attack or jamming.

Because of payload limits for launch vehicles, satellites are made of light materials and

have little shielding. This "softness" makes them easy marks. Moreover, both superpowers are developing weapons (missiles, lasers, etc.) for destroying satellites. It has been estimated that merely two U.S. laser-armed platforms could destroy all Soviet low-orbit satellites in less than twenty-four hours.¹² The Soviets, on the other hand, using exploding-interceptor satellites might be able to hit all U.S. low-orbit satellites in less than two hours. Shielding, warning sensors, reserve "in-orbit" satellites, emergency-launch capabilities for replacing satellites, and smaller satellite radar cross sections are protective countermeasures that are being studied. With present technology, it is doubtful that satellites can survive a dedicated antisatellite attack.

Satellite communications can be neutralized also by severing their links with ground control and receiving facilities. Jamming is one possibility; another is hitting the extremely vulnerable tracking, control, and communications relay facilities on the ground. These ground stations are all "soft" and could not resist more than 5 psi blast overpressure. Moreover, because of technical factors and financial limitations, these stations cannot be hardened or put in a mobile mode. Thus, successful military or diplomatic satellite communications, in a nuclear context, is a highly doubtful enterprise.

Given the high vulnerability of present C³ links, it is clear that current unilateral attempts to safeguard communication links will not be adequate. Maintaining reliable C³ capabilities will require increased efforts in both the technical realm and the diplomatic sphere.

In the technical area, hardening, redundancy, and dispersal are needed. Improvements have been realized but more are necessary.

- Existing ground control and receiving facilities for our satellites must be hardened. The following should be procured, where feasible: fiber optical circuits (which are not vulnerable to EMP effects), underground cables with lower atomic-numbered materials, additional control

and receiving points in our ground-based communications network, filters for antenna inputs to ward off EMP effects, a system of dispersed computers that distributes processing load and shares a common data base, and more backup branches and circuit redundancies in our communications networks. These technical improvements should include C³ channels for diplomatic missions abroad.

- Currently, the United States depends heavily on airborne systems to provide survivable C³ links in a nuclear setting. Unfortunately, the aircraft have become increasingly vulnerable. They depend on runways or in-flight refueling, they can be detected by satellites, and they are not available in large numbers.¹³ At best, they offer C³ capabilities for only a few days. The number of entry points that these aircraft have to ground-based communications is surprisingly small. For instance, "there are only 14 ground entry points which allow the National Emergency Airborne Command Post (NEACP) and the SAC AABNCP (Strategic Air Command Alternative Airborne National Command Post) access to ground-based, communications networks."¹⁴ To improve the situation, we must increase the number of aircraft assigned to C³ missions; increase the number of "ground communicating entry points" for these aircraft; make these aircraft more jam-resistant; give more aircraft the capability of supporting diplomatic C³ needs, not simply "one-way" military emergency-action transmissions; and explore the option of moving C³ tasks to more survivable, and less time-pressured, submarine systems. Allowing the State Department access to such seaborne systems will go far toward upgrading our diplomatic C³ in a nuclear setting.

- Currently, the military has a last-resort relay system in case all airborne relays are destroyed—the Emergency Rocket Communications System (ERCS). Approximately one dozen silo-based Minuteman III ICBMs are employed in the system. Launched with an extremely high trajectory, they can provide about thirty

minutes of message transmission. The ERCS is designed for military use. However, the possibility of using an upgraded ERCS for diplomatic transmissions should be explored. Further, unlike the present ERCS, which is increasingly vulnerable to Soviet ICBM attack, a system dedicated to diplomatic support might be safeguarded by multilateral agreements among the major powers.

- The military sees the commercial telecommunications industry as a possible backup system of last resort. Unfortunately, the electric-power and commercial telecommunications industries have done little to EPM-harden their facilities. Such hardening, together with the storage of spare parts and the development of contingency plans to cope with nuclear attack, is badly needed.

Unfortunately, technological safeguards alone cannot provide a survivable diplomatic C³ capability in a nuclear context. We also must seek options and safeguards at the political level. The following are offered as illustrative possibilities:

- Overall control of U.S. Armed Forces lies with the President, the Secretary of Defense, or their deputized alternates (i.e., the national command authorities or NCA). However, it is highly uncertain whether the NCA would survive a surprise attack on Washington, D.C. Because diplomatic resource people will be sorely needed, particularly if the NCA is disabled, quick-response evacuation plans for key diplomatic personnel should be drawn up, similar to those for the NCA. Certainly, more should be done to safeguard such personnel than is now contemplated.

- Current dependency on airborne command systems could unintentionally promote escalation. Airborne links might be able to survive a dedicated C³ Soviet attack for up to 72 hours.¹⁵ Survival beyond a week is unlikely. This limited survival time could create pressure to employ strike options before they are foreclosed by C³ disintegration. Diplomatic efforts will not

be promising in such a time-urgent context. To avoid such "use it or lose it" pressures, backup C³ tasks might be extended to our nuclear submarine fleet. Diplomatic functions could be especially well served here. Foreign Service officers with special instructions, plenipotentiary powers for negotiating in a nuclear context, and the relevant foreign-language skills might be routinely assigned to selected submarines. In so doing, the United States could safeguard both its military and diplomatic options.

- To further supplement our diplomatic C³ powers, the United States should press vigorously for emergency access to the communications facilities of friendly, foreign governments.¹⁶ Beyond this, the United States might seek international recognition for sanctuaries or "target-free" zones. Such zones could be either land or sea tracts. These zones could then serve as neutral diplomatic turf in the manner of Sweden or Switzerland in earlier wars. Such "neutralizing" agreements for ensuring survivable communications might include orbiting satellites, ships or submarines. Certain designated satellites or vessels could be set aside for emergency communications in time of war with their status protected by international agreement. To ensure that such satellites or vessels are not used secretly for military purposes, they might be sponsored by an international organization, such as the United Nations.

- The United States might explore plans for safeguarding Soviet plenipotentiaries while obtaining reciprocal treatment for our diplomatic personnel, which would extend the traditional principle of diplomatic immunity. Without such planning, U.S. efforts to preserve

a diplomatic C³ capability might be futile. Negotiating, after all, requires that there be people on *both sides* of the communications link.

- Finally, the United States should press for the expansion of MOLINK to encompass all nuclear powers, including mainland China. Further, any diplomatic safeguards and responsibilities embracing plenipotentiaries or satellites should be extended to all MOLINK officials.

CURRENTLY, most U.S. efforts in C³ are designed to preserve as many military options for as long as possible after the onset of a nuclear attack. However, it seems equally important to preserve negotiating options for as long as possible too. The suggestions I have outlined here are not necessarily a solution to the problem of preserving a diplomatic C³ capability: the real solution is to avoid nuclear war altogether. Nevertheless, these suggested measures might go some distance toward redressing the imbalance between our military and diplomatic C³ efforts.

In the theory of deterrence, a secure second-strike capability, with the associated C³ backup, is important. But for actual nuclear combat, Bernard Brodie's counsel to "terminate the strategic exchange as quickly as possible, with the least amount of damage possible on both sides" is paramount. It follows, therefore, that a "secure second-chance" negotiating capability and the necessary C³ support to make such termination possible deserves our deepest consideration.

University of Oklahoma, Norman

Notes

1. Air Force Chief of Staff General Lew Allen testified in early 1981:

In the strategic field, my No. 1 worry is the fragility of our command and control Our present network of automated command, control, and communications systems [was] conceived for the most part in the late 1950's. In peacetime, these

systems are reliable and effective, in wartime they are highly vulnerable to attack.

(*Armed Forces Journal International*, September 1981, p. 28).

More recently, General Bennie Davis, Commander in Chief, Strategic Air Command, echoed these concerns: "It's [C³ survivability] my number-one priority, my number-one worry, and my number-one concern—because there are certain vulnerabilities that we have

not yet solved." (*Armed Forces Journal International*, June 1981, p. 30).

2. In the eighteen months starting in January 1979, the U.S. defense system produced 147 "major" and 3703 lesser false alarms. See John Prados, *The Soviet Estimate* (New York: Dial Press, 1982), p. 290.

For a brief description of the WWMCCS, see Richard Head, Frisco Short, and Robert McFarlane, *Crisis Resolution: Presidential Decision Making in the Mayaguez and Korean Confrontations* (Boulder, Colorado: Westview Press, 1978), pp. 85-99.

Information on the crippling problems of the WWMCCS is voluminous. See, for example, James North, "Hello Central, Get Me NATO: The Computer That Can't," *Washington Monthly*, July/August 1979, pp. 48-52; William Broad, *Science*, 14 March 1980, pp. 1184, 1186-87; Harold Brown, Secretary of Defense, House Appropriations Committee Hearings, January 1979, p. 256; Richard Gutman, Director of the Government Accounting Office, House Armed Services Committee Hearings on Military Posture, March 1979, p. 3223; "Federal Signals," *SIGNAL*, May/June 1982, p. 8.

For a dissenting view arguing that the WWMCCS works well, see Perry Nuhn, "WWMCCS and the Computer That Can," *Parameters*, September 1980, pp. 16-21.

3. Benjamin Schemmer, "Reagan Okays M-X, New Bomber Force, C³ Improvements; Defers M-X Basing," *Armed Forces Journal International*, November 1981, p. 32.

4. Present C³ imbalances between the military and diplomatic services, unfortunately, extend beyond nuclear scenarios. The State

Department, for example, has always lagged behind the Defense Department in crisis management facilities and staff support. See Head et al., pp. 68-69.

5. Senate Foreign Relations Committee, *US-USSR Strategic Policies*, 4 March 1974, p. 13.

6. Donald Rumsfeld, *Annual Defense Department Report FY 1978*, 17 January 1977, p. 146.

7. North, pp. 48-49.

8. For a brief, lucid treatment of EMP, see Janet Raloff, "EMP, A Sleeping Electronic Dragon," *Science News*, 9 and 16 May 1981; pp. 300-03, 314-15.

9. Deborah Kyle and Benjamin Schemmer, "Interview with Commander-in-Chief, SAC, General Bennie Davis," *Armed Forces Journal International*, June 1982, p. 32.

10. Desmond Ball, "Can Nuclear War Be Controlled?" *Adelphi Papers*, No. 169 (London: International Institute for Strategic Studies, Autumn 1981), pp. 10-11.

11. Fritz Ermarth, "Contrasts in American and Soviet Strategic Thought," *International Security*, Fall 1978, p. 152.

12. Richard Burt, "New Laser Weaponry Is Expected to Change Warfare in the 1980s," *New York Times*, 10 February 1980, p. 54.

13. Ball, p. 17.

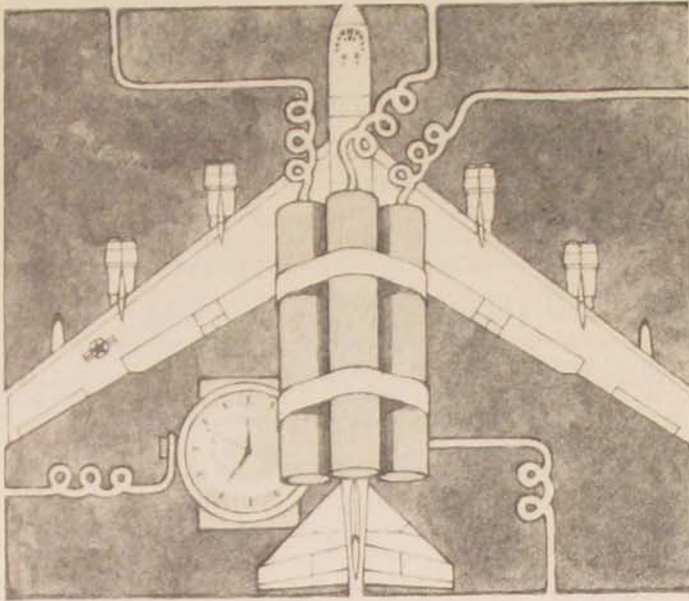
14. *Ibid.*

15. "Modified E-4 Project Calls for 6 Aircraft," *Aviation Week and Space Technology*, 10 May 1976, pp. 59-61.

16. The State Department seems to be moving on this issue. See Stuart Branch, "A Diplomatic Challenge: Provide More—Protecting More," *SIGNAL*, May/June 1982, pp. 22-23.

Art in writing, as in sculpture, often consists in the removal of surplusage.

Aristotle
The Poetics



IS YOUR BASE READY TO COUNTERACT TERRORISM?

CAPTAIN MICHAEL T. MCEWEN, USA

EARLY one spring morning, four terrorists hijacked the pickup truck of a civil service worker who was en route to his job at a major U.S. Air Force base in the Southwest. They murdered the worker and dumped his body in a drainage ditch where it was obscured from view.

Almost simultaneously, similar hijackings were being conducted by three other teams of terrorists stationed along rural roads that served the same base. In each instance, the terrorists loaded small arms, ammunition, plastic explosives, and detonating materials into the hijacked vehicles and drove to join the line of vehicles entering the base during the morning rush hour. They passed easily through the gates as the guards on duty surveyed the official identification stickers on their front bumpers.

Safely on base, the terrorists emerged from their vehicles, now dressed as telephone and electrical repairmen, complete with tool boxes. Moving through the base, they emplaced and armed fifty charges in office buildings, shops, and dependent housing areas. After the last of the charges had been hidden and set with time detonators, the terrorists moved toward areas they knew to be safe.

At 10:30, two charges exploded. The first killed a secretary and injured four other people

in an office building. The other blast damaged the family housing unit of a senior master sergeant substantially, but no one was inside at the time.

By 10:45, the base commander was receiving and assessing initial reports on the incidents. At 11:00, he received a telephone call from the terrorist group leader. The phoner demanded that his group be provided a fully fueled and operational B-52, with full crew, to be ready for takeoff no later than 12:30 p.m. If the aircraft was not ready in time, the terrorist warned, twelve charges would detonate at various locations on the base every thirty minutes from 1:00 p.m. to 2:30 p.m. On the other hand, if his demands were met, the terrorist stated, he would reveal where to find a map of bomb locations.

The terrorist indicated that he had more than a dozen men who were armed with automatic weapons and grenades, equipped with gas masks, and prepared to open fire on any individuals who might attempt to apprehend them. He then stated that he would call back after giving the commander fifteen minutes to think things over.

A phone click indicated that the terrorist leader had hung up the phone. The base commander paused only momentarily as full aware-

ness set in: he had a very serious problem to solve.

THIS particular scenario has never been enacted. A base commander has not been faced with this situation. Had he been, he would have found a myriad of considerations competing for his attention during the short reaction time available, *unless* his prior planning for counteracting terrorists had been thorough.

Given the circumstances of this scenario, a base commander would have a number of problems to respond to, regardless of the course of action he decides to follow in response to the terrorists' demands. He will certainly want to evacuate the base so that nonessential personnel and dependent families will be safe. He will also need to establish the best possible perimeter security in order to prevent further terrorist infiltration. Tasks such as these require significantly greater manpower resources than that normally available from base security forces. Civilian police and even the National Guard might provide the additional personnel needed, but getting access to these resources on such short notice is unlikely unless there has been prior planning and coordination.

Another potential problem will be the arrival of the news media. Since media attention is a major goal of terrorists, authorities must have plans and measures worked out to ensure that the coverage given is accurate and not subject to manipulation by the terrorists. An extended terrorist incident could attract as many as one hundred news media representatives. Handling them could pose a very significant distraction to an unprepared commander.

As the commander assesses the situation, he may desire access to specialized technical assistance from bomb disposal or ordnance experts. Such assistance may need to come from another military installation, or it may be present in nearby civilian law enforcement agencies. Obviously, prior planning is necessary for the

quick mobilization of such aid and advice.

These are only a few of the problem areas that the commander in the preceding scenario would face—in addition to the major problem of handling the terrorist situation itself. Obviously, planning and preparedness are the keys to maintaining control and minimizing damage.

Assessing Terrorism Counteraction Resources

Every person in a leadership position who is responsible for counterterrorism planning and preparedness must begin his efforts with a comprehensive assessment of the civilian, military, and private sector resources that are in his area of operations and responsibility. One excellent way to begin is to conduct an invitational terrorism counteraction conference. By selecting the appropriate lead agency, such as the local police department, to sponsor a symposium for top-level leaders and planners, it is possible to open many potential avenues for interagency cooperation. If an additional effort is made to have a formal presentation by a recognized academic or professional organization that has acknowledged expertise in the terrorism field, then the conference will also provide a solid educational base for the various participants. (A suggested basic schedule is a morning session of informational presentations by the terrorism studies resource group, followed by an afternoon of discussions among the invited agencies to consider capabilities, plans, needs, and guidelines. Cooperative planning and preparedness activities can evolve very nicely from such a program.)

Although the list of specific groups and individuals that might play a supporting role in the terrorism counteraction plan of any given organization obviously would be tailored to each geographic location, a number of agencies and organizations would be found on most checklists of potential counterterrorism assets.

Law enforcement. This sector is obviously

the primary resource that is available in virtually any locale. A survey of resources in this category must include all governmental levels. At the federal level, the basic resource is the U.S. government's lead agency for domestic terrorism, the FBI. In addition, there may be local representatives of such agencies as the Secret Service, the Coast Guard, and the Department of State. At the state level, usually there is a highway patrol, plus specialized state law enforcement or crime control groups. Local-level enforcement resources may encompass metropolitan police forces, nearby police departments, and county sheriffs.

Military forces. In addition to the assets of federal military installations and bases in the area, the National Guard will be the most immediately responsive mode of military assistance in most cases. When listing military resources, one should be sure to have a clear understanding of command authority and chains-of-command. Unless a request for assistance is directed to the proper command level, valuable time may be lost when help is needed.

Public services. The organizations in this category that may be helpful include fire departments and those departments or agencies responsible for public works (because of their access to heavy construction equipment), traffic control, and airport/seaport facilities. These organizations may be able to supply needed equipment or expertise in special situations. In the event of a terrorist incident, most or all of them should receive early notification so that they can assess the possible impact on their areas of responsibility and respond effectively.

Utility companies. Because control of water, electricity, or gas could be of vital concern in certain terrorist incidents, utility companies should be included in counteraction planning.

Emergency medical services. Since almost any terrorist attack could cause injuries, rapid access to quality emergency medical care is a clear necessity.¹ Most hospitals have a disaster plan that enables them to provide a high volume of emergency care on relatively short no-

tice. However, terrorism counteraction planners must know the proper notification system that will mobilize these additional assets. Local ambulance service is another critical component of the emergency medical care system. It may be necessary for the ambulance service to call on standby personnel or adjacent services to meet the demands of a high-casualty terrorist incident. Again, knowledge of the proper notification channels is of paramount importance to planners.

News media. The news media play an important role in international terrorism. When developing a terrorism counteraction plan, planners should take special care to develop a list of names of key management and editorial personnel at each TV station, radio station, and newspaper. However, a number of special considerations must be taken into account in planning the news media liaison system that will be used in terrorist incidents.

Distant resources. Government, industry, law enforcement, and military leaders are sometimes too parochial in their terrorism counteraction outlook. Special sources of assistance often exist outside the immediate jurisdiction of the commander who finds himself faced with a terrorist incident. Although certain laws and regulations may restrict some of the assistance that one group can offer to another, some creative cooperative planning is usually possible. If the various leaders examine one another's resources and begin to exchange information to the extent that security restrictions allow, then the best possible use of available assets can be planned.

The Role of the News Media: A Dilemma

Usually, terrorism involves actions that are directed at "a target group wider than the immediate victim or victims."² The primary means by which this wider group is approached is the news media. Thus, the slant and content of the media coverage of given events will have great

bearing on whether the terrorists are successful in their efforts.

Commanders and other authorities generally recognize the importance of good relations with the news media. But where terrorism is concerned, special circumstances often require other than normal media relations and thus prior attention by terrorism counteraction planners. Since terrorism is usually a high-priority news story, extra reporters are likely to be assigned to cover an incident. Many of these additional reporters may be strangers to the local area and unfamiliar with command and staff personnel. Although public information officers and reporters may have the best intentions, confusion, uncertainty, suspicion, and even hostility can develop among them as the incident evolves. Reporters who have not worked with law enforcement officials regularly will not know the usual ground rules and procedures. Obviously, there is potential for misunderstandings and mistakes that can lead to news coverage unfavorable to those attempting to solve the terrorist problem, which is sometimes exactly what the terrorists would like to see.

It is difficult to overstate the importance of news media coverage in terrorism. Since terrorists often intend to influence an audience that is much larger than the immediate victims, the role of media coverage is obvious. Who had heard of the South Moluccan separatists before they hijacked a Dutch train and held hostages for nearly two weeks while radio, TV, and newspaper coverage focused continuous international attention on the incident?³ The South Moluccans knew that they were much better served by appearing on the worldwide media stage than by simply engaging in unpublicized guerrilla fighting in the isolated Moluccans Islands of the South Pacific.

Indeed, terrorists sometimes plan their specific attacks to achieve maximum media coverage even when their own chances of a successful tactical outcome are reduced by the publicity. For instance, the Palestinian terrorists who planned the 1972 Munich Olympic Games at-

tack on the Israeli athletes were well aware that Israel and West Germany took very hard-line positions concerning acts of terrorism. The Palestinians probably did not really expect to secure any significant concessions during that episode, but they were certain that they would get tremendous media coverage. And while it is true that most of the people who watched the TV accounts were disgusted by the senseless killings, it is also true that they learned about the Palestinian perspective on the Mideast situation. It may be tempting to say that such situations can be eliminated by simply eliminating the press from the scene. However, exclusion of the press not only violates a fundamental principle of democracy but also plays into the terrorists' hands, offering proof that their claims of "government repression" have validity.

When the issue of international terrorism first began to gain widespread public attention in the early and mid-1970s, a number of "terrorism and the press" conferences were held in cities across the United States. Many, if not all, of these meetings were successful because they provided a forum in which the various parties in the public and private sectors could examine others' points of view and procedures. Such conferences are less effective when they follow a format in which one side tries to tell the other what "ought" to be done in terrorist incidents. These "ought" issues are value-laden and seldom are fruitful areas for discussion. A better approach is to allow each participating party to explain its needs and expectations freely after a well-planned briefing on the techniques, goals, and targets of terrorists has been presented. This type of conference will reveal the kinds of official sector-news media problems that can arise as a result of a terrorist incident. By making everyone aware of these potential problems, such a conference can reduce the probability that they will materialize during an actual event.

Even when terrorists are not sophisticated enough to create problems between the news media and the official sector deliberately, difficulties

can develop and the poor media coverage that can result may enhance acts of terrorism. However, if authorities take a cooperative stance, the slant of news coverage generally will be good.⁴ Most reporters and editors deplore violence, are in sympathy with innocent victims, and want to see efficient, governmental response to terrorists' threats. It is important to understand how this natural alliance between the press and law enforcement agencies can work to reduce the effectiveness and incidence of terrorist acts.

Developing a Response Plan

After available resources have been assessed and cooperative interorganizational efforts initiated, a plan for an organization's response to an act of terrorism must be developed.⁵ An organization may have a variety of plans to meet various potential terrorist threats. The key to developing plans should be an assessment of the types of threat that the particular organization is likely to face. At many facilities or bases, it will be possible to create a plan that deals with the most likely threat and then develop variations of this plan to respond to other eventualities. Because a barricade and hostage situation is the most demanding problem usually faced by organizations, the basic plan often deals with that scenario but is adaptable to cope with such problems as bomb threats, armed attacks, or arson.

Generally, terrorist attacks can be divided into two categories, based on duration. A completed attack is an event, such as a bombing or arson, in which the terrorists have acted and departed the area during the time that the authorities react. A continuing attack poses the problem of terrorists' remaining on the scene or leaving a continuing threat (e.g., a delayed-action bomb). Usually, a continuing attack is the more difficult type of attack to deal with.

For both types of attack, response plans must cover at least four major areas of action: command, analysis/planning, security, and tactical response. However, specific planning considerations will vary greatly, depending on particular

locations, organizations, and threat potentials.

In addressing the issues related to command, the planner must keep in mind that there are several different levels of command to consider. The highest level of command is the domain of the person with final authority for a given situation. This person may not be present in the actual on-the-scene activities, but his approval or agreement may be necessary to carry out certain actions, such as an armed assault against terrorists that may result in the loss of life. This "ultimate" commander must be readily accessible so that critical decisions can be made on very short notice if the situation demands.

Just below this highest level of command is the person who has overall responsibility for the terrorism reaction forces at the scene of the incident. This person normally has the authority to direct the available resources (personnel and equipment) in the manner he deems most appropriate to respond to the threat. (In some cases, he may even have been designated the ultimate authority.) However, he probably should not be the commander of assault teams or other combat forces who may come into direct contact with the terrorists. The on-the-scene commander must have a balanced and detached outlook, and he should be equipped with the best possible communications gear so that he can consult up and down the chain of command, as required.

An aggressive and well-trained individual should command the assault or tactical personnel selected to counteract the terrorists directly. This commander should not be called on to become involved in the overall incident management problem. He should be free to give his full attention to decisive action against the terrorists, should that become necessary.

The area of analysis/planning probably provides the best hope for a successful outcome of an incident. The resources available in this area may be very limited in the early phases of an incident, but planners should try to expand this resource rapidly whenever it is possible. The analysis/planning team is the on-the-scene commander's think tank. This team should have the best pos-

sible information on the physical environment, personalities of the terrorists and hostages, available terrorism counteraction resources, and any other pertinent aspects of the problem. This group must assess the developing situation and formulate possible courses of action for the commander to consider. Some of the individuals on the analysis/planning team may be specialists from outside the parent organization. These might include local psychiatrists, explosive or bomb experts, medical personnel, building or facilities engineers, and terrorism specialists from such agencies as the FBI, Department of State, and nearby academic institutions.

The need for a terrorism counteraction plan to address security is obvious. Few incidents can be managed effectively unless the area of operations is sealed off from outside interference by the news media, the public, and possible terrorist reinforcements. Providing such security may be difficult for the security forces normally available, particularly if the perimeter to be covered is extensive. For this reason, planners must make provisions to acquire whatever additional manpower may be necessary to ensure complete and continuous security.

Another security issue is emergency medical service. A hostage situation, bombing, armed assault, or other violent actions could result in serious casualties. The need for emergency medical personnel and ambulances may be much greater than the local system can accommodate. Therefore, a terrorism counteraction plan should require that an assessment of the casualty potential be accomplished during the very early phases of an incident so that adequate emergency medical services can be mobilized.

The fourth area to address in the plan is tactical operations—a term used in its broadest sense. Such operations are not limited to assaults by “SWAT teams.” In fact, the hostage negotiation process is a tactical response. It seeks to accomplish the tactical objective (i.e., release of hostages and surrender of terrorists) without the use of violence. In a bomb-threat situation, the deployment of search teams and bomb disposal

experts would be a tactical operation. The tactical operations part of the counterterrorism plan should address the entire range of actions and activities that the commander might undertake to respond directly to the terrorists threat.

These four areas comprise the basic elements of an effective terrorism counteraction plan. The specific application of these basic guidelines is the job of the terrorism counteraction planner who must study and evaluate the threat potential, response resources, and environmental factors within his designated area of responsibility.

Testing the Plan: A Training Exercise

After a plan has been developed and distributed, it is prudent to test it. A well-designed and realistic training exercise is an excellent means to determine the strengths and weaknesses of any given plan. Lacking this experience, an organization is faced with the possible prospect of testing the plan during a real incident.

Military organizations are usually very experienced with training exercises. However, because some of the specific aspects of counterterrorism action distinguish this operation from other types, some basic points about a counterterrorism training exercise may be useful to consider.

A terrorism training exercise should be based on a written plan. Having the plan in written form not only facilitates the planning and operation of the exercise but also provides a reference document that can be used as the basis of an afteraction critique. The exercise plan can be conveniently divided into two sections: preparation and execution.

The fundamental item in the preparation section is the incident scenario. Exercise planners should develop a scenario that is based on a realistic appraisal of the potential threats their organization faces. The scenario must describe or delineate the composition of the “terrorist” group conducting the attack, the actions of the group, the timetable for the attack, and the area of opera-

tions. The scenario must be broad enough in scope to test the response plan realistically, but it should not be more ambitious than necessary. For instance, a scenario might call for the command and control force to initiate a mass evacuation, but the scenario can be written in such a manner that the response is confined to the planning/analysis arena and not actually carried out basewide. In simplest terms, the scenario should specify the type of incident being conducted and the target that has been selected. The challenge facing the scenario writers is to maximize realism while minimizing interference with nonparticipating organizations and individuals.

The scenario should also contain adequate information on the ideological motivation of the terrorist group. In most cases involving U.S. organizations, it is probably most useful to assume that the terrorists are part of a radical revolutionary group. Their demands might refer to "U.S. warmongering," "capitalist exploitation," "American imperialism," and "rebellion by the masses." Developing an actual list of demands in the language of the likely terrorists not only adds realism to the exercise but provides an opportunity for exercise participants to detect "soft" demands that may be useful points of negotiation.

Selection of the individuals who will be the terrorists is clearly an important part of the preparation process. The primary factor in this selection should be experience or training in small-unit military or law enforcement tactics. At least one of the terrorists should have some acting experience, if possible, so that he or she can interact easily with the negotiators. If the terrorist recruits are not familiar with the basic ideology they will represent, they probably should be given a "cram course" in it. Recruitment of minority members and women for the terrorist team should be considered seriously also. Their presence will reflect the varied composition of real terrorist groups and may offer additional challenges and pressures for force leaders and negotiators to cope with.

A final consideration and an extremely important one in preparation is to plan notification

and coordination procedures so that outside organizations and authorities will be aware of what is going on. Although only some of them may be involved actively in the exercise, it is important to communicate clearly with other interested agencies in the area so that an embarrassing and potentially dangerous false alarm can be avoided. Remember to extend the planning and coordination to the news media. While it may be desirable to have reporters assume initially that an incident is real, it is vital in such instances to ensure that the senior editors and station managers are informed about the deception in advance and cooperative about carrying it out.

If the preparation activities for an exercise have been accomplished thoroughly and conscientiously, execution of the exercise should be relatively smooth. Execution itself can be divided into three phases: prediscovery, attack, and resolution.

The prediscovery phase of the exercise includes the breaching of the perimeter security system, if any, and the infiltration of the terrorists and their material into the area of operations. However, if the goal of the exercise is to test more than the security system, it may be necessary to bring the terrorist team "inside" before the exercise begins. A security system that is already highly effective will detect the terrorist infiltration. To allow the scenario to be played out and to test out the complete terrorism counteraction plan in such circumstances, an arbitrary breach of security may need to be assumed.

The attack phase of the exercise might be a bomb placement, an act of arson or sabotage, or a hostage-taking. Only the hostage-taking incident requires a significant amount of special planning. The hostages should be treated realistically but not overzealously. There have been cases where hostages in an exercise have been accidentally injured because they or the terrorist team had not been briefed adequately on procedures.

Once the attack has commenced, the resolution phase should flow naturally as the terrorism counteraction plan is put into effect. If the resolu-

tion phase involves interaction between the terrorists and the control force, some instruction should be given to the terrorist team on the most desired scheme of play. For instance, during a hostage incident, the terrorists could be preinstructed to "execute" one hostage in an effort to provoke the control force into an assault. Or, the instructions might be for the terrorists to begin with a very hard-line stance and then negotiate down to a complete surrender if the control force uses a reasonably credible line of negotiation.

It is difficult to generalize on the desirable length of this resolution phase except to say that it ought to be long enough to test the response plan fairly. In any case, it is probably better to suspend an exercise, even though it is incomplete, rather than force it to proceed at an unrealistic pace.

Although developing a good training exercise requires substantial effort, such as exercise offers probably the best possible means to test and evaluate a terrorism counteraction plan. Literature on counterterrorism training is becoming available to assist training planners. A very complete discussion of the special problems that distinguish a terrorism incident simulation from other types of training exercises can be found in Ste-

phen Sloan's recent book, *Simulating Terrorism*.⁶

AS RECENT incidents around the world have shown, terrorist threats and attacks against U.S. Armed Forces are a real and continuing danger. Commanders and their staffs have an obvious responsibility to prepare for such an eventuality. Beyond the very basic guidelines offered here, some excellent formal training is now available. The Air Force Dynamics of International Terrorism Course at Hurlburt Field, Florida, is an informative one-week overview. The Army offers other one-week courses, including a Terrorism in Low-Intensity Conflict Course and the Individual Terrorism Awareness Course, which are offered at the Special Warfare Center, Fort Bragg, North Carolina, plus a Countering Terrorism Course, offered at the Military Police School, Fort McClellan, Alabama.⁷

Fort Bragg, North Carolina

Author's note: The views and opinions expressed in this article are those of the author and not those of the Department of Defense. The information in the article should be considered a supplement to official guidelines and not a substitute for any applicable directives or regulations. Terrorism counteraction is a dynamic and rapidly growing endeavor within the Armed Forces, and readers are urged to consult the latest publications of their service in order to ensure that the latest official procedures are understood and implemented.

Notes

1. Martin E. Silverstein, "Emergency Medical Preparedness," *Terrorism: An International Journal*, vol. 1, no. 1, 1977, pp. 51-69.

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3. *International and Transnational Terrorism: Diagnosis and Prognosis*, Central Intelligence Agency, April 1976, p. 24.

4. Richard Clutterbuck, *Living with Terrorism* (New York: Arlington House, 1975), p. 147.

5. *Countering Terrorism on U.S. Army Installation*, Training Circular 19-16, Department of the Army, April 1983.

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7. The Terrorism in Low-Intensity Conflict Course focuses particularly on terrorism directed at peacekeeping and advisory forces, the Terrorism Awareness Course covers self-protection techniques, and the Countering Terrorism Course concentrates on base security.

R military affairs abroad

THE INDIAN AIR FORCE OF THE 1980s

modern clout in Southwest Asia

FIRST LIEUTENANT JERROLD F. ELKIN

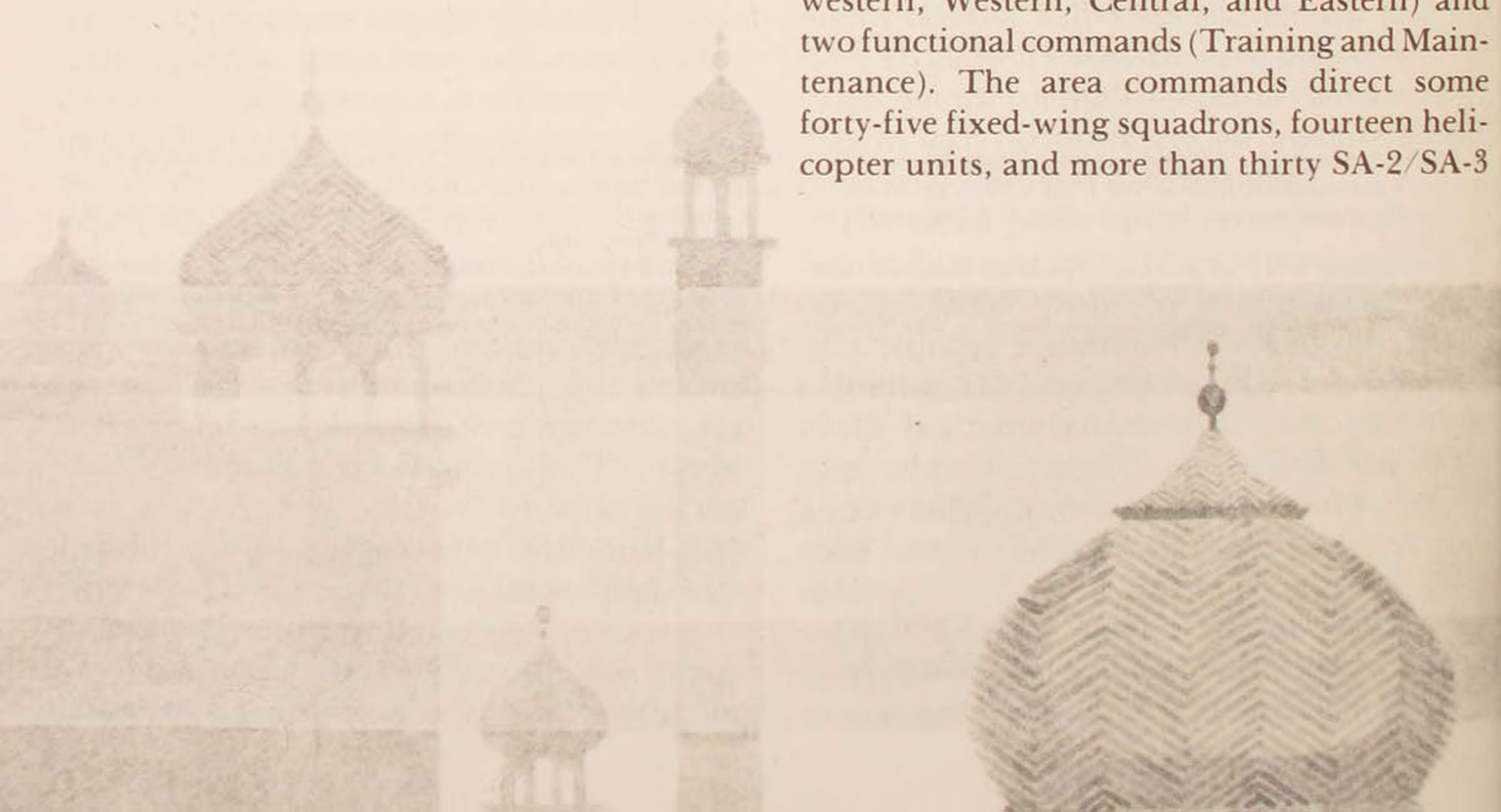
THE Indian Air Force (IAF), the largest air arm in non-Communist Asia, is engaged in an extensive modernization effort. For example, advanced combat aircraft, including the Soviet MiG-23 and 27 Flogger, Anglo-French Jaguar, and French Mirage 2000 are being assimilated by the IAF or soon will be added to its inventory. As a consequence, India will have the capability to overwhelm the Pakistani Air Force (PAF), despite the PAF's acquisition of forty F-16s; gain local air superiority in a conflict with China along their common border;

and inflict significant damage on the navies of extraregional powers operating in waters adjacent to the subcontinent.

Command Structure

The IAF headquarters, located in New Delhi, consists of four principal branches: Air Staff (led by an air chief marshal designated as Chief of the Air Staff), Administration, Plans and Policy, and Maintenance.¹

Operational and support elements are organized into four geographic commands (Southwestern, Western, Central, and Eastern) and two functional commands (Training and Maintenance). The area commands direct some forty-five fixed-wing squadrons, fourteen helicopter units, and more than thirty SA-2/SA-3



squadrons.² The IAF's fixed- and rotary-wing aircraft inventory numbers 1400, of which approximately 635 are combat aircraft. Indian Air Force personnel strength is 113,000.³

Missions

The IAF has been tasked with the following responsibilities: air defense, long-range interdiction/counterair operations, close air support, reconnaissance, transport, and heliborne support.⁴

air defense

The Soviet MiG-21 is the numerically predominant interceptor in the IAF. Currently, India is replacing its MiG-21FL Fishbed-D assets with the more advanced MiG-21bis Fishbed-N. The IAF has integrated the Matra 550 Magic close-combat missile with the "bis" variant and is endeavoring to upgrade this aircraft's radar, avionics, and vertical acceleration.⁵ India now is manufacturing the MiG-21bis under license; the production run of 150 units will be completed in the mid-1980s.

The MiG-21 fleet is being supplemented by variable-geometry MiG-23MF Flogger air superiority fighters. These aircraft are armed with the AA-7 Apex AAM, the AA-8 Aphid, and 23-mm cannon. Reportedly, the IAF will employ Floggers and Fishbeds in groups of six: two MiG-23MFs will attempt to down incom-

ing aircraft with air-to-air missiles; and intruders eluding these Floggers will be met by four MiG-21s.⁶

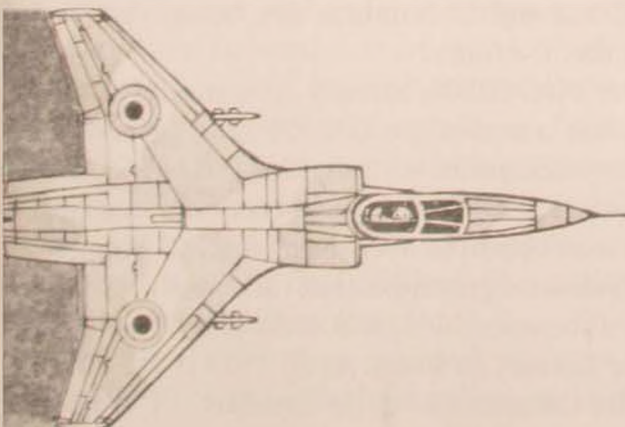
Air defense resources will be augmented materially by the impending acquisition of forty Mirage 2000 multirole fighters. Early in 1985, IAF pilots will start ferrying the forty aircraft from France to India, with the last delivery scheduled for December 1986. New Delhi retains the option to assemble/coproduce an additional 110 aircraft, although it is unlikely that this option will be exercised.⁷

The Indian Mirage will be fitted with internally mounted electronic support measures (ESM) and electronic countermeasures (ECM) equipment. The aircraft will carry two 30-mm Defa cannon, along with two Matra 550 short-range and two Matra Super 530-D medium-range air-to-air missiles (AAMs). Alternatively, it can be loaded with 11,000 pounds of ordnance on nine external stations.⁸

The Mirage 2000 will be powered initially by the SNECMA M53-5 engine rated at 20,000-pound thrust, but later it will be retrofitted with the 22,000-pound-thrust M53-P2. Similarly, the Thomson-CSF RDM (multifunction Doppler) radar will be superseded in 1985 by the Thomson-CSF/Electronique Serge Dassault pulse-Doppler radar designated RDI.⁹ The RDI radar, mated with the Matra 530-D AAM, gives the Mirage 2000 a look down/shoot down capability.

In endeavoring to justify Mirage 2000 expenditures, government spokesmen have argued that Pakistan's acquisition of sophisticated American aircraft alters the balance of air power in the subcontinent. Therefore, it is necessary to procure the Mirage 2000 to serve as a counterpoise to the F-16. However, it is doubtful that the IAF leadership fully embraces this proposition.

The IAF is aware that, among air forces in the region, it enjoys an overwhelming superiority (both qualitative and quantitative) in virtually all categories of air weaponry and equipment. Indeed, this marked power asym-



metry allowed the IAF to advocate conclusion of the Mirage 2000 agreement (while the aircraft still was under development) in the face of a late 1982-early 1983 F-16 delivery date. If F-16 deployment had been perceived as affecting Indo-Pakistani power relationships significantly in the near term, then the IAF probably would have supported one or more of the following policy alternatives: prompt off-the-shelf acquisition of an existing interceptor capable of carrying long-range AAMs and guns with a high rate of fire, significant expansion of the MiG-23MF procurement program, immediate purchase of advanced AAMs, and/or greatly accelerated upgrading of ground-based air defense systems.

Manned interceptors, in conjunction with SA-2/SA-3 squadrons, form one component of India's Air Defense Ground Environment system (ADGES).¹⁰ Other constituent elements include static and mobile radars, tropospheric scatter and microwave communication links, and regional air defense centers tasked with threat assessment and determination of appropriate responses. The ADGES, to be completed by the end of this decade, suffers from a number of shortcomings. First, the system may prove vulnerable to low-flying aircraft, especially those employing ECM. Second, terrain masking may prevent radar detection of intruding aircraft in hilly areas along the northern border. Third, there is insufficient redundancy in the ADGES communications network.¹¹ Nevertheless, the ADGES will furnish an air defense capability far exceeding that of any neighboring state.

long-range interdiction/ counterair operations

In the event of hostilities with Pakistan, the IAF reportedly plans to attack command and control centers, all Pakistani Air Force main bases, and segments of the communication/transportation infrastructure. The resulting immobilization of Pakistan's armed forces would be

followed by strikes against major ground units.¹² The Jaguar, India's principal deep-penetration/all-weather interdiction aircraft, would perform many of these missions. Two Jaguar squadrons now are operational; this force will expand to five squadrons by 1987.

Approximately 60 percent of the Jaguars to enter IAF service will be assembled in India. These aircraft will incorporate Adour Mk811 turbofan engines (affording 15-25 percent greater thrust than the original power plant), the Sagem Uliss 82 second-generation navigation/attack system, and two Matra 550 Magic AAMs carried on overwing pylons (thereby freeing the one fuselage and four underwing stations for a variety of ordnance options, including bombs of up to 1000 pounds, cluster munitions, and rocket pods). The Jaguar also may be fitted with the French Agave radar in order to increase its maritime interdiction capabilities.¹³

close air support

Indian planners anticipate that any future war with Pakistan will be a high-intensity, short-duration affair (partly because of likely diplomatic intervention by third parties). Consequently, the IAF is developing a powerful tactical strike force to facilitate rapid advances by ground elements. Offensive air support will be furnished by at least three MiG-23BN and eight MiG-27 squadrons, augmented by the MiG-21M Fishbed-J and Ajeet (an upgraded version of the British Gnat).¹⁴ Aging Hawker Hunter Mk 56, Sukhoi Su-7, and Hindustan Aeronautics Limited HF-24 Marut fighter-bombers are being removed from the inventory.

The MiG-23BN, already operational in the IAF, has a centerline GSh-23 cannon and six fuselage and underwing hardpoints, which can be loaded with a variety of ordnance ranging from iron bombs to ASMs. The MiG-27 Flogger-D, a dedicated ground-attack variant of the MiG-23, will be assembled (and, eventually, produced under license) in India. April 1984 is the target date for the assembly of the first MiG-27 by Hin-

dustan Aeronautics Limited (HAL), a public-sector firm. In addition to a 23-mm cannon, the MiG-27 can carry up to 7716 pounds of external ordnance, including a mix of air-to-air and air-to-surface missiles.¹⁵

reconnaissance

New Delhi's desire to enhance its information-gathering capabilities (especially concerning Pakistani and Chinese military installations and troop disposition in border areas) led to the 1981 purchase of Soviet MiG-25R Foxbat reconnaissance aircraft. Reconnaissance tasks also are discharged by Jaguars fitted with photoreconnaissance pods, Canberra PR Mk 57s, and camera- and sensor-equipped HS-748 Avros. Maritime reconnaissance responsibilities were transferred to the Indian Navy in the mid-1970s.¹⁶

transport

The multiplicity and obsolescence of transport aircraft types, along with concomitant difficulties in spare parts procurement, have served to degrade IAF operational readiness in the airlift area. The IAF transport fleet in the main consists of 1940s-vintage C-47 Dakotas; Fairchild C-119Gs (nicknamed "flying coffins" by Indian aircrews), which entered service in 1952 and were to have been retired in 1967; An-12 Cubs, scheduled for retirement in 1975, but which will remain in the inventory until the late 1980s; Caribous; and Otters. Serviceability rates of these aircraft are quite low. For example, in 1982 all C-119s and many C-47s were grounded because of metal fatigue and wing spur cracks.¹⁷ Few Caribous are airworthy at any time. These circumstances, in turn, have placed a considerable burden on the two An-12 squadrons. Intensive use of the IAF's thirty-odd Cubs (e.g., transporting supplies to troops in Ladakh and lifting paramilitary forces to assist in suppression of domestic violence) has resulted in availability levels as low as 20 percent.¹⁸

The IAF is attempting to remedy this situation by procuring appreciable numbers of modern

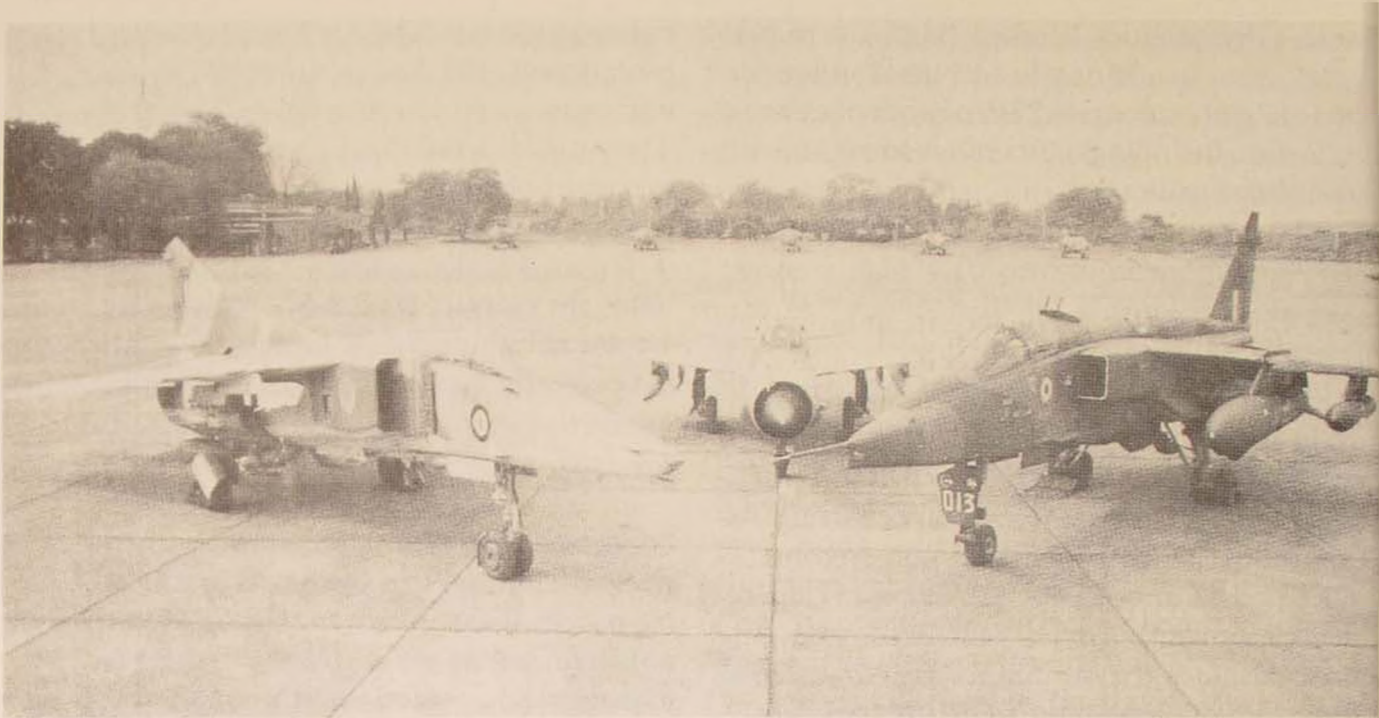
transport aircraft. The Air Force has ordered approximately 100 Soviet An-32 Cline medium transports to replace the C-119s and Caribous. The An-32 is a rear-loading STOL aircraft able to paradrop men and equipment. The An-12 is to be superseded by the Soviet Il-76 Candid heavy transport. Finally, a defense committee has selected the Dornier Do 228-200 light transport to assume communication, liaison, and utility duties presently handled by C-47s and Otters.¹⁹

heliborne support

Some airlift support is provided by IAF rotary-wing aircraft, such as the Soviet Mi-8 Hip. The Mi-8, which can lift twenty-eight troops or as much freight as the C-47, plays an important logistic support role in northern and northeastern India. Further, many of the more than sixty Hips in service are armed with 57-mm rocket pods to provide close air support for army units.

The IAF helicopter inventory also includes the SA 316B Alouette III (renamed Chetak) and the SA 315B Lama (renamed Cheetah)—French helicopters manufactured under license in India. A number of the approximately 150 IAF Chetaks are fitted with AS-11 antitank guided missiles. In addition to its antitank responsibilities, the Chetak is tasked with communication and liaison missions. The Cheetah performs a variety of activities in mountainous areas and, organized into airborne observation post flights, assists in directing Indian Army artillery fire.²⁰

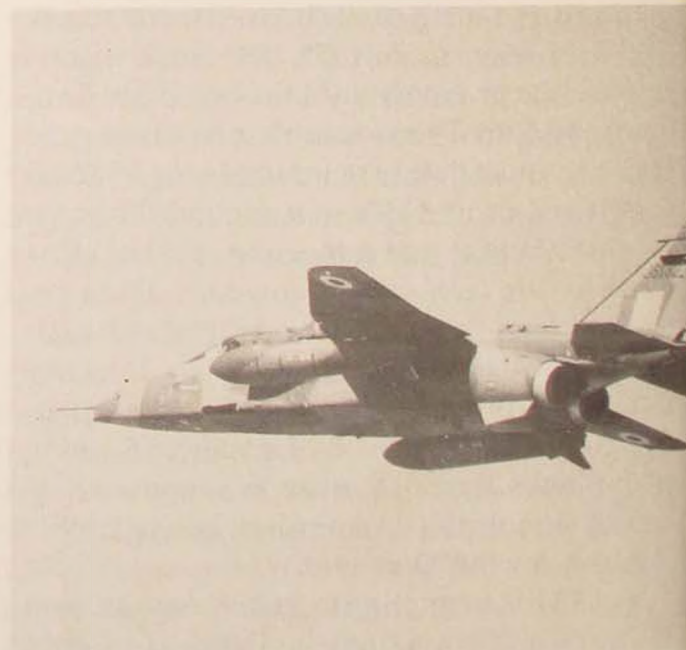
The IAF has a requirement for a multipurpose advanced light helicopter (ALH). Such a helicopter was to be designed and produced by Hindustan Aeronautics Limited; however, changes in IAF design parameters, inadequacies of HAL's engineering staff, and a generally dilatory approach to project decisionmaking have slowed ALH development for a decade. Consequently, India is purchasing Soviet Mi-24 Hind gunships as an interim step.²¹ However, rather than being an interim step, the Hind purchase may indicate termination of indigenous helicopter design/fabrication efforts.



Relationship with Other Services

Indian Air Force interaction with the Indian Navy and Army is marked by both conflict and cooperation. Protracted jurisdictional battles have been fought with the Navy over maritime patrol and interdiction. In the mid-1970s, the following compromise was reached: the Navy assumed responsibility for reconnaissance missions, while maritime interdiction remained under IAF control. However, IAF control of this interdiction mission may prove nominal at best, as the Navy's air arm rapidly is augmenting its inventory of advanced antishipping weaponry by procuring such systems as the Sea Eagle long-range missile (to be carried by Westland Sea King helicopters). In addition to this clash with the Navy, the IAF is engaged in a dispute with the Army about helicopters. The Indian Army is endeavoring to bring IAF helicopter assets within its organizational purview, arguing that most rotary-wing aircraft perform ground force support functions. Furthermore, its leaders suggest that their service's combat effectiveness would be enhanced greatly by integration of attack helicopters with mechanized infantry, armor, and

The MiG-23, MiG-21, and Anglo-French Jaguar (above) are among the advanced fighter aircraft in the Indian Air Force . . . Two Jaguar squadrons are already operational, with three more planned by 1987. These fighters (such as the one below) can perform air-superiority as well as land and maritime interdiction missions.





Since 1966, Hindustan Aeronautics Limited has manufactured several versions of the MiG-21, including the MiG-21FL (above) and the MiG-21 Mongol trainer (below).



heliborne troops. The IAF rejects the "major user" principle, asserting that all air activity must be coordinated by one service.²²

Despite these policy disharmonies, the military leadership recognizes that India's strategic environment demands increased interservice cooperation. As a result, the number of joint service exercises has increased dramatically. For example, a large amphibious warfare exercise was held in the Nicobar Islands during April 1983. Indian Air Force participation included preinvasion strikes by Canberra medium bombers, evaluation of damage levels by photoreconnaissance, and rocket attacks against enemy positions by Mi-8 helicopters.²³ More significantly, the first triservice command has been established in the Andaman and Nicobar Island chain. Headed by a naval officer reporting to Eastern Naval Command, this organization has been assigned several ships, an army brigade, and, in the future, a fighter squadron.

IAF Capabilities

Traditionally, Indian defense planning has focused on the threats presented by Pakistan and China. The IAF appears capable of fulfilling its combat missions against either of these potential adversaries.

In an Indian-Pakistani conflict, there would be a pronounced disparity in IAF-PAF strength levels. For example, India enjoys a substantial numerical advantage in sophisticated fighters and fighter-bombers. In contrast, the obsolescent F-6, a Chinese version of the MiG-19, forms the major part of Islamabad's interceptor/ground attack force. Beyond this, the IAF surpasses the PAF in virtually all operational and support areas, ranging from command, control, and communications (C³) and electronic warfare (EW) to logistics. If India and Pakistan engage in a fourth war, it is likely that the IAF would defeat the PAF in short order.

Indian Air Force weapon systems and equipment also are qualitatively superior to those of the People's Republic of China, but China's

combat aircraft far outnumber those of the IAF. Nevertheless, in a Sino-Indian conflict, China probably would not be able to apply all her air resources against the IAF. First, few Chinese airfields are close enough to the Indian border to permit effective operations. Second, those bases that are near India have not been upgraded in terms of support facilities, and this deficiency would impede Chinese efforts to reposition units. Finally, aircraft deployed to Tibet would be hampered by high-altitude takeoffs, which would decrease munitions loads and increase fuel consumption. In contrast, New Delhi has been assiduous in concentrating air and ground forces against China. Thus, many IAF squadrons are located within striking distance of the China-India frontier. Assuming meteorological conditions in the Himalayas do not preclude flight operations, the IAF should prove able to gain local air superiority in an Indian-Chinese conflict.

In addition to security concerns generated by Pakistan and China, New Delhi is disquieted both by the presence of extraregional powers in waters contiguous to India²⁴ and by the vulnerability of its island possessions. While the Navy must assume primary responsibility for defense of offshore areas, the Air Force will perform significant duties as well. Thus, a fighter squadron is to be stationed in the Andamans, and a squadron also may be placed in the Lakshadweep chain.²⁵ Island-based units probably will consist of Jaguars fitted with advanced antishipping weaponry. IAF maritime interdiction resources, along with the Indian Navy's Sea Harriers and Sea Kings armed with third-generation Sea Eagle missiles, will constitute a formidable threat to forces operating in the Indian Ocean.

Future Procurement Activity

If India's civilian leadership maintains or increases present IAF funding levels, Air Headquarters is likely to seek further force modernization, including acquisition of the following systems: an airborne early-warning system to pro-

vide look down acquisition and integrated battle management capabilities; precision and standoff munitions to ensure high kill ratios and minimize exposure of costly strike aircraft; sophisticated ECM equipment;²⁶ a "Wild-Weasel"-type electronic defense suppression system; a state-of-the-art air superiority fighter, such as the Soviet MiG-29 Fulcrum (reportedly, New Delhi has purchased a number of MiG-29s, which may enter the IAF inventory by the end of 1984); a domestically manufactured light combat aircraft to replace the Ajeet and Hunter; and an advanced remotely piloted vehicle to deliver ordnance in hostile air defense environments.²⁷

THE IAF has become one of the world's strongest air forces, a fact that must be appreciated by any

of India's potential military adversaries. India's increased air power, in conjunction with the ambitious modernization programs of her Army and Navy, not only will reinforce India's national security but enhance her ability to attain foreign policy goals. For example, it affords New Delhi the means to impose stability on island-states in the Indian Ocean—an important option for India, given the recent communal violence in Sri Lanka. It also permits New Delhi to assist threatened Indian nationals, or citizens of Indian descent, in countries along the Indian Ocean littoral.²⁸ Further, as part of India's overall arms buildup, IAF modernization provides a military underpinning for Indian claims of middle-power status in the context of global interaction.

U.S. Air Force Academy

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17. "Air Force Grounds Dakota, Fairchild Aircraft," *Times of India*, 14 February 1983, p. 5.

18. Shekhar Gupta, "Distress Signals," *India Today*, 31 August 1983, p. 88.

19. "India Selects Do 228 Again," *International Defense Review*, August 1983, p. 1030.

20. *The Indian Air Force*, pp. 10, 52, 61.

21. *Ibid.*, p. 10.

22. H. K. Dua, "Government Drags Feet on Army Air Wing," *Indian Express*, 1 April 1983, p. 7.

23. R. S. Bhandari, "Amphibious Warfare," *Sainik Samachar* (military journal published in New Delhi), 28 August 1983, pp. 22-23.

24. India's desire to exclude both U.S. and Soviet forces from the Indian Ocean is suggested by a statement in the most recent annual Report of the Ministry of Defense: "The intense and rapidly growing military activities of the Major Powers in the Indian Ocean have serious implications for us." Government of India, Ministry of Defense, *Report: 1982-83*, 1983, p. 2.

25. "Lakshadweep Being Developed as Defense Base," *Newsmag*, 16 April 1983, p. 31.

26. IAF doctrine reportedly calls for two ECM-equipped aircraft, along with four other escorts, to accompany fighter-bombers on strike missions. Typical missions will involve sixteen aircraft, attacking targets in waves of four at thirty-second intervals. Rikhye, "F-16 Again," p. 1.

27. Ashley J. Tellis, "IAF's Tasks for Tomorrow," *Times of India*, 11 June 1982, p. 4. In recent years, New Delhi has acquired weaponry from a number of West European states. However, the Soviet Union remains India's principal arms supplier. Given Moscow's willingness to offer highly favorable terms in arms transactions (e.g., payment in Rupees, at concessionary interest rates, over seventeen years following an initial seven-year grace period), this pattern probably will continue.

28. Grazebrook, p. 25.

R commentary

To encourage reflection and debate on articles appearing in the *Review*, the Editor welcomes replies offering timely, cogent comment to be presented in this department from time to time. Although content will tend to affect length and format of responses, they should be kept as brief as possible, ideally within a maximum 500 words. The *Review* reserves the prerogative to edit or reject all submissions and to extend to the author the opportunity to respond.

INFORMAL DOCTRINE AND THE DOCTRINAL PROCESS: A RESPONSE

Lieutenant Colonel Dennis M. Drew

WHEN one reads Major General I. B. Holley's article one begins to understand the enviable reputation of this remarkable man.* General Holley retired recently from the Air Force Reserve after a long and distinguished military career. But there is more to I. B. Holley than meets the eye. He holds the title "Professor," which accurately indicates his standing as a teacher at the highest academic level. But Professor Holley is also Doctor Holley, a scholar of the highest rank, known for his original research and numerous publications. In all three roles, he has been an inspiration to those in the military-academic community.

His well-thought-out article is concisely constructed and elegantly written. More important, he is absolutely correct: throughout the literature concerning military doctrine, semantic problems confuse readers and muddle issues. In Clausewitzian terms, semantic inaccuracies form a linguistic fog of war. Professor Holley's

article clears away much of the fog and makes a significant contribution to our understanding of doctrine and related subjects.

I believe, however, that Professor Holley does not place enough importance on what he calls "informal doctrine" and its place in the doctrine development process. Informal doctrine is the result of repeated experiences that produce similar results and subsequently produce beliefs—sometimes personal, sometimes broadly held—about what usually works best. One would assume, given the state of Air Force doctrinal publications, that these informal doctrinal beliefs are much more ubiquitous than officially blessed doctrines. One might also assume that these informal beliefs are more timely, more accurate, and more useful than officially sanctioned doctrine, which must suffer through the travails of bureaucratic coordination and compromise before publication.

On the other hand, informal doctrinal beliefs may not be accurate and useful. Those who hold such beliefs may have an experience base that is shallow (i.e., repetitions too limited

*Major General I. B. Holley, Jr., USAFR (Ret), "Concepts, Doctrines, Principles: Are You Sure You Understand These Terms?" *Air University Review*, July-August 1984, pp. 90-93.

to draw accurate generalizations). The experience base might also be too narrow (e.g., combating only one kind of enemy aircraft) to be generalized. Unfortunately, those who hold informal doctrinal beliefs based on insufficient data will rarely realize the shortcomings of their beliefs until too late—a situation that can lead to excessive combat losses and eventual defeat.

This dual nature of informal doctrine (easily developed, but with a high possibility of error) puts the process of developing official doctrine and the importance of official doctrine in a new light. The doctrine development process must evaluate informal doctrine and separate the wheat from the chaff. Well-founded informal doctrinal beliefs must be sorted out from the plethora of half-baked ideas that permeate large and diffuse organizations. The official doctrine that results from the development process becomes the vehicle for inculcating well-founded beliefs throughout the force. Everyone must know, in Professor Holley's words, what "pattern of behavior *will probably* lead to the desired result." Thus, those who develop and publish official doctrine face a difficult task and bear a critically important responsibility.

Inherent in the process of turning informal doctrine based on field experience into official doctrine is the notion that official doctrine should "bubble up" from below rather than be imposed from above. I have argued elsewhere that there are various levels of doctrine, which are distinguished and defined by their levels of abstraction.¹ Although it is difficult to translate field experience and the doctrinal beliefs derived therefrom directly into the more abstract levels of doctrine, operational doctrine should issue directly from generalizations based on field experience.² To base it on anything else is to run the risk of producing ineffective and perhaps fatal dogma rather than doctrine.

How does one let doctrinal beliefs bubble up to be evaluated and officially blessed? The dynamic changes of German tactical doctrine

during World War I provide an excellent model.³ The development of elastic defensive methods in 1916-17 and the development of the so-called Hutier offensive tactics in 1917-18 were the direct result of the German High Command's solicitation of ideas from *battlefield units*. Although Germany was strategically unsuccessful in the war, both of these doctrinal changes were masterpieces of successful doctrine at the tactical level.

All of this leads us to a set of difficult questions. Do we recognize the pervasiveness of informal doctrine? Does our official doctrine bubble up from informal doctrine? Do we actually ask our warriors in *field units* for their beliefs about what usually works best? How do we sort out sound beliefs from those that are unsound? Who does the sorting, and what biases do they bring to the task? When our doctrinal beliefs are based on exercises, maneuvers, and war gaming rather than on actual combat, do we understand and consider the assumptions, biases, and limitations of those simulations that may have colored the results? Do we recognize that although our exercises have considerable value they are always poor imitations of actual combat—or do we seduce ourselves into thinking that mock combat portrays reality accurately? The answers to these questions will cast considerable light on the Air Force doctrinal development process and on the value of the official doctrine developed by that process.

Professor Holley has made a significant contribution to our understanding of a very complex subject. However, his greatest service has been to raise additional questions of considerable importance. Indeed, there is more to Professor Holley—and more to his article—than meets the eye.

Maxwell AFB, Alabama

Notes

1. For a more complete explanation, see Lieutenant Colonel Dennis M. Drew, "Of Trees and Leaves: A New View of Doctrine,"

Air University Review, January-February 1982, pp. 40-48.

2. Although the Air Force calls this level of doctrine "operational doctrine," the term "organizational doctrine" is used in "Of Trees and Leaves" (see note 1).

3. Timothy T. Lupfer, "The Dynamics of Doctrine: The Changes in German Tactical Doctrine during the First World War," *Leavenworth Papers*, No. 4, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas, July 1981.

Leavenworth Papers, No. 4, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas, July 1981.

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ON SEEKING A FORUM FOR THE MITCHELLS

Colonel Paul F. Murphy

WHEN reading "Seeking a Forum For the Mitchells,"* I was struck by the logical fallacy it exposed. Major Denny Nelson makes the point that the Air Force of the '80s lacks a forum for the present-day "Mitchells" to air their views. However, the fellowship he holds and the publication of his views in the *Review* are clear evidence that such a forum does exist today as in the past.

The Air University is the one organization that has the facilities, people, and mission nec-

essary to stimulate, cultivate, and propagate the ideas, arguments, and controversy so vital to continued excellence. For those of us not at AU, the *Review* is our link to that process. Accordingly, I would like to see a few good arguments in each issue. There are two sides to every coin, and the *Review* could do us all a favor by tossing the coins and letting us see how they come up. It should also be fun!

Whiteman AFB, Missouri

*Major Denny R. Nelson, "Seeking a Forum For the Mitchells," *Air University Review*, July-August 1984, pp. 85-86.

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ON CLASSICAL MILITARY STRATEGY AND BALLISTIC MISSILE DEFENSE

Major General Haywood S. Hansell, Jr., USAF (Ret)

I WOULD like to offer my congratulations to Major Owen E. Jensen on his thoughtful article.* I find myself in strong agreement with his argument for a balanced system of strategic defenses and strategic offensive capabilities.

Michael Howard divides military history and analysis into four categories or "dimensions"—operational, logistical, technological, and societal. In my opinion, the societal dimension—the willingness and courage of the people of our democracy to take great risks and endure great suffering in pursuit of national goals—has now become the dominant dimension in the determination of U.S. strategic military requirements and the consequent setting of limits to U.S. policy worldwide. National policy and national decision making are now, more than ever, resting upon the defenseless shoulders of our exposed citizens.

The people of our democracy are directly threatened with potential annihilation if they pursue policies in conflict with those of the Soviet Union, and those American people are literally our national command authority. In our present state of defenselessness, I find it difficult to believe that our people will stand up to a Soviet nuclear threat in a possible future confrontation or conflict, nor do I believe that they will support vigorous conventional warfare where escalation to nuclear warfare is a possibility.

Unfortunately, given existing circumstances, our people may be prudent in their hesitancy, for we have permitted the Soviets to reach military superiority, and I doubt that a defenseless population could be well served by

our present Army, Navy, or Air Force. Without resolute and secure sources of support, military forces tend to diminish in potential effectiveness, even though those forces should be capable not only of providing continental defense but of exercising "defensive compellence" abroad in support of the nation's vital values where those values are challenged.

As Major Jensen points out, Clausewitz described war in its broad relationship to national purpose: "It is clear, that war is not a mere act of policy, but a true political instrument, a continuation of political activities by other means." War has as its objective the preservation or fulfillment of a nation's goals and desires. However, in today's environment, the mere *threat* of war has become nearly as decisive as military victory or defeat in war itself, and fear of nuclear devastation can so disarm a defenseless democracy that national objectives become subverted.

One aspect of an effective national policy is security for our national assets and safe survival of our people despite changing international circumstances, including confrontations and armed conflict. Yet safety at home, by itself, is inadequate as a transcendent aim, in part, because our national goals also include domestic prosperity and retention of individual and institutional freedom—aspects of policy that extend beyond our national borders. Our domestic prosperity has need of unprejudiced access to foreign markets and foreign sources of materials, and we need to support an international environment of freedom. To ensure all of these aspects of our national interest in today's world requires our having the capability to exercise military force abroad. We do not aspire to conquer territory or to establish suzerainty over other people, but we do have

*Major Owen E. Jensen, "Classical Military Strategy and Ballistic Missile Defense," *Air University Review*, May-June 1984, pp. 54-63.

need to demonstrate military power in support of our rights, values, and associates abroad; that is, we need sufficient capability to exercise "defensive compellence" to force aggressors to desist from acquisitive domination over our essential values beyond our borders.

The recent military action in Grenada is an example of "defensive compellence" on a very minor scale. We did not invade to acquire. We invaded to prevent further extension and establishment of Soviet and Cuban power in a region that we consider vital to our security and commerce. We restored local government and withdrew as Grenada regained stability. To the great credit of the Reagan administration, our military action was swift, conclusive, and carried out so quietly that no confrontation with the Soviets ensued.

Our military capability to exercise defensive compellence on a larger scale rests upon two fundamental bastions: (1) our people's willingness and courage to take grave risks in the face of confrontation, potential nuclear escalation, and active conflict, for which *urban defenses* are essential; and (2) the availability of military instruments capable of exercising *offensive* power to inhibit recourse to war or to compel others to desist from aggressive actions or policies, including those instruments required, in extremis, for controlled and selective destruction of an aggressor's capability to wage war. If we lack these military capabilities, we can expect eventually to lose safety, domestic prosperity, and freedom for ourselves and for others who depend on our strength.

Defense strengthens deterrence. It is necessary not only to deter war but, most important, to deter Soviet domination. Defense offers an alternative to capitulation and strengthens our position in the face of crisis. It also can decrease the likelihood of nuclear holocaust by providing time for deliberate decision rather than in-

stantaneous resort to massive retaliation lest our vulnerable offensive weapons be destroyed.

Many military analysts and proponents espouse the maintenance of the "existing balance." To my mind, no such balance exists. We are attempting to balance the collective will and courage of 220 million frightened American voters against that of fourteen tough men in the Kremlin. Soviet citizens have little voice in major decisions (indeed, their opinions may be ignored completely by the Kremlin), but our voting citizens must have a reasonable chance of survival—they must have defense—if we are to expect them to support policies and programs that possibly might increase the risk of nuclear confrontation or conflict. This situation must be remedied, not sustained. We must reduce the potential effects of nuclear attack as much as possible.

Fortunately, technology offers a potential remedy in the rapidly developing field of directed-energy beams and kinetic-energy ballistic missile defense weapon systems, and President Reagan has recognized and proclaimed the national need. In the months ahead, I hope that we can develop the national consensus necessary for establishing an effective BMD system, thereby enhancing our nation's security and restoring our ability to act boldly in our national interest. Deploying such a system would not supplant the need for offensive capabilities. But it would restore and augment the usefulness of our Army, Navy, and Air Force.

Hilton Head, South Carolina

Major General Haywood S. Hansell, Jr., USAF (Ret), (B.S., Georgia Institute of Technology) was active in formulating the air plans instrumental in defeating Nazi Germany. He retired in 1946, was recalled for the Korean War, and then retired again in 1955. General Hansell is author of *The Air Plan That Defeated Hitler* (1972), and his recent article "The Societal Dimension: The Influence of Urban Defense on Strategic Options" appears in *National Security Strategy* (Praeger, 1984) edited by Dr. Stephen J. Cimbala.

R books, images, and ideas

*War must be waged in earnest or not at all.
There can be no middle course.*

V. I. Lenin



AN INSIDER'S WARNING TO THE WEST

LIEUTENANT COLONEL GREGORY VARHALL
MAJOR KENNETH M. CURRIE

ONE of the Russian legacies to the Soviet Empire was a serious perspective on life. Love is serious. Hate is serious. Life is serious. Death is serious. And, as it involves all four of these, war is a very serious business. Two books that relate various aspects of the Soviet outlook on war particularly well have been published recently. Written by Viktor Suvorov, the pseudonym of a former Soviet combined arms officer who fled to the West, *The Liberators:*



Inside the Soviet Army and *Inside the Soviet Army* are destined to make a valuable contribution to the field of Soviet studies, particularly in regard to military doctrine and Moscow's intentions toward the West.

The two volumes stand in sharp contrast to one another. *The Liberators* is a bitter, often sarcastic collection of anecdotes about life in the Soviet army and the events leading up to the 1968 "liberation" of Czechoslovakia. It portrays an army of doubtful readiness and ability—an army concerned more with the externals of military prowess than with proficiency and professionalism. *Inside the Soviet Army*, written later, is a much less subjective look at the Soviet military machine. Suvorov continues to point out weaknesses, but he does so without much of the bitterness he reveals in *The Liberators*. Here it is clear that Suvorov regards the Soviet military as a formidable adversary despite its shortcomings. When read together, the two books provide an insight into the Soviet Armed Forces that would be difficult to match, short of face-to-face conversations with a Soviet combined arms officer.

Viktor Suvorov became a Soviet officer because of an overproduction of fertilizer in the Soviet Union. Actually, the story is a bit more complex than that. Suvorov was a truck driver on a collective. He had been detailed to pick up the 150 tons of fertilizer being donated by a state chemical combine, he had twenty-four hours to accomplish the task, and he had only a broken-down truck with a ton-and-a-half tank. If he failed to accomplish his assignment, his Regional Committee First Secretary would be fired. One final detail: a single round trip would take ten hours. Impossible? Nothing is impossible in the Soviet Union! Suvorov and the dozens of drivers from similarly honored collective farms queued at the combine and accepted their first loads; then they drove away

to the Dnieper River into which they poured their liquid nitrogen and returned for their second and subsequent loads. Thousands of fish were killed, but Suvorov returned to his *kolkhoz* (agricultural cooperative) ahead of schedule to report that he had accomplished his objective. When he asked what he should do with the single load of fertilizer he had brought back, he was told that he could use it on his private plot, since the gift from the combine had come a full two months before the *kolkhoz* could use it on the fields. Suvorov did as he was instructed. Later that spring, when his neighbors' plots were growing well, Suvorov's plot was barren: obviously, it had had too much fertilizer too early. Faced with the prospect of starvation, Suvorov examined his two other alternatives—prison or the army. Suvorov did what any patriotic Soviet citizen would have done under similar circumstances and thus began his career in the Soviet army.

TO THE reader unacquainted with the realities of Soviet life, *The Liberators* is filled with anecdotes that frequently sound unbelievable.† For example, Suvorov describes how the "puritanical" Warsaw Pact Commander Viktor Kulikov ordered the destruction of German beer halls, only to order them rebuilt immediately after learning that his soldiers were paid for the halls' revenues. In another hilarious story, he tells of "sclerotic" Army General Alexander Yepishev who repeated his entire speech while his audience of Soviet army officers dutifully transcribed a duplicate set of notes.

One of the most compelling chapters in *The Liberators* describes the execution of a young Soviet soldier for desertion during the Czech crisis of 1968. In this account, which sharply brings to mind the stories of the Gulag by Alek-

†Viktor Suvorov, *The Liberators: Inside the Soviet Army* (London: Hamish Hamilton, 1981, \$7.95), 202 pages.

sandr Solzhenitsyn and others, Suvorov powerfully and almost poetically describes how a pistol-packing KGB officer carried out an execution shortly after the death sentence was pronounced. The story makes it clear that some things in the Soviet Union have changed very little.

If there is a problem with this book, it is Suvorov's consistent portrayal of the Soviet army as an ill-equipped, poorly disciplined horde incapable of effective combat. Suvorov accurately recounts the grim realities of the Soviet Ground Forces of 1968, but he does not point out that many of the equipment deficiencies which he describes have been corrected since then. On the other hand, recent accounts corroborate that the problems of poor discipline and morale persist, and Suvorov's account may well have a contemporary analogue among the Soviet soldiers in Afghanistan. Nevertheless, there is the danger that those unfamiliar with Soviet military power in 1983 will use *The Liberators* to downplay the Soviet threat. Although Suvorov makes it clear that the Soviet officer and his soldiers are not ten feet tall, one should not automatically assume that they are midgets who can easily be dealt with in a conflict.

It is in reading Suvorov's second book, *Inside the Soviet Army*, that one realizes that Suvorov's knowledge of the Soviet military system is indeed worthy of expanded treatment.† (In fact, Suvorov tantalizes his readers with the suggestion that the military's intelligence arm—the GRU—merits a book in itself, thus holding out the promise of a third book in this series.) *Inside the Soviet Army* is one of the most important books in its field published in the past decade, providing us our first comprehensive look inside the Soviet military since the publication of *The Penkovskiy Papers*. It should be read by all U.S. military officers who would

like to expand their knowledge of their potential battlefield opponents and by all national decision makers who must understand the Soviet military mind-set and its implications for U.S. national security. In fact, if one were limited to a single book on the Soviet military, this volume should receive strong consideration.

Inside the Soviet Army picks up where *The Liberators* left off: the time is 1968, and the Soviet army is preparing to liberate either Czechoslovakia or Romania. After a brief account in the anecdotal fashion of his first volume, Suvorov launches into a well-written tutorial on the Soviet military. He does not revert to long anecdotes until the close of the book, where he uses them to describe the career patterns of Soviet officers.

The basic premise of *Inside the Soviet Army* is that Western observers do not understand the Soviet Union. Instead, we mirror-image, failing to recognize that the Soviets are working from a totally different experiential and cognitive basis. As disturbing as this premise may be, it is probably closer to the truth than many of us are willing to admit. Consider for a moment the test Suvorov offers:

Three Soviet motor-rifle companies are on the move in the same sector. The first has come under murderous fire and its attack has crumbled, the second is advancing slowly, with heavy losses, the third has suffered an enemy counterattack, and, having lost all its command personnel, is retreating. The commander of the regiment . . . has three tank companies and three artillery batteries in reserve . . . "You are to guess," I say, "what steps a Soviet regimental commander would take And if a company commander asks for air support, does he get it?" (p. 170)

The obvious American answer is to apply artillery, armor, or close air support to assist the units in trouble. "Wrong!" says Suvorov. The Soviet regimental commander would ignore both the unit in retreat and the unit

†Viktor Suvorov, *Inside the Soviet Army* (London: Hamish Hamilton, 1982, \$9.95), 296 pages.

pinned down under fire. All support must go to the unit that is pushing ahead.

Too often we overlook differences in philosophy that underlie others' decisions. If our adversary does not react to situations or adhere to the same strategic concepts as we would, we either assume that he is in need of education or we are surprised by his "ingenuity." Recognizing differences in fighting philosophy can be a great asset to military strategists and tacticians; when they go unrecognized, serious consequences can result. Suvorov is astonished by the West's failure to appreciate and exploit these important influences in its planning. At one point, Suvorov relates how he developed a perception of the U.S. national character based on his viewing of American westerns:

It became clear to me that a modern American cowboy who is working up to a decisive fight will always be expected to begin by spitting at and insulting his opponent and to continue by throwing whisky in his face and chucking custard pies at him before resorting to more serious weapons. He expects to hurl chairs and bottles at his enemy and to try to stick a fork or a tableknife into his behind and then to fight with his fists and only after all this to fight it out with his gun.

This is a very dangerous philosophy. You are going to end up by using pistols. Why not start with them? Why should the bandit you are fighting wait for you to use your gun? . . . by using his most deadly weapon at the beginning of the fight, your enemy saves his strength . . . This will enable him to save his own despicable life . . . He will shoot first. At the very start of the fight. (p. 160)

This analysis leads to Suvorov's assertion that the Soviets will use their nuclear weapons from the onset of hostilities with the West. He has little regard for the possibility of a conventional war, either as a prelude to nuclear escalation or as a means of achieving Soviet objectives in toto—possibilities suggested by recent Soviet military writings. Since, to the Soviets, preemption would not constitute a first strike but would be a purely defensive act, the matter is one of common sense and national survival rather than of morality. By Suvorov's reckon-

ing, the Soviets build nuclear weapons to use them, not to keep them in the holster.

Inside the Soviet Army has fifty-eight chapters grouped within eight major parts: the higher military organization, types of armed services, combat organization, mobilization, strategy and tactics, equipment, the soldier's lot, and the officer's path. In effect, Suvorov begins at the top and works down to the basic building block of the Soviet military, leaving that with which he is most familiar—the Soviet officer—until the end.

His description of the higher military organization is clear and concise. Disdaining the formal organizational chart approach popular in the West, Suvorov argues that there are but three forces at work at the top: the Party, the KGB, and the Army. No one of these can survive without at least tacit support from one of the others, and the relationship is a carefully structured balance of power in the classic sense. All other Soviet power relationships are permutations of these three actors. Illustrative of this is the Defense Council, the ultimate decision-making authority and policymaker for the Soviet military, which Suvorov describes as "the Supreme Being [General Secretary], his Right Hand, and, below them, the triangle—Party, KGB, and Army." (p. 34)

Moving down the military chain of command, Suvorov provides no major surprises to those familiar with Soviet command and control arrangements, including his description of the Warsaw Treaty Organization (WTO) as a nonentity. While the Soviets are obviously the major player in the WTO and are generally acknowledged as being in control of the organization, Suvorov is more blunt than most Western authors in his assessment of the WTO's role in Soviet military planning. He notes that non-Soviet Warsaw Pact members are not permitted to have their own armies; rather, their armed forces are "integrated" into Soviet-controlled formations to flesh them out, much as Soviet reservists are called up to fill up the less ready combat units. Further, as far as Suvorov is con-

cerned, Poland never signed the WTO instruments of ratification, since the Polish Minister of Defense who initialed for "free, independent, popular, socialist Poland" was, in fact, Marshal of the Soviet Union Rokossovskiy, assisted by Soviet Colonel-General Poplavskiy. (p. 17) Suvorov does not address the post-Czechoslovakia Warsaw Treaty Organization "reforms" that reputedly were to give a greater voice in Warsaw Pact affairs to the non-Soviet members. However, since most of these changes were purely cosmetic, nothing is lost by this omission.

In the sections on organization, Suvorov is simultaneously at his best and worst. His description of Soviet military organization is as clear as any available, and his personal insights are invaluable. He does an outstanding job of putting the front strategic directions, military districts, component commands, and so on into a very understandable perspective. At the same time, he reveals the book's greatest flaw: it does not touch on the ongoing reorganization of the Soviet military. Admittedly, this circumstance did not arise until after Suvorov left the Soviet Union, but he could have added a short postscript on the reorganization without expending much effort, and his unique knowledge would help place the changes into proper perspective. Despite this omission, only a few portions of *Inside the Soviet Army* appear dated, and these do not detract measurably from the book.

Some assertions made in *Inside the Soviet Army* are certain to be challenged by Western observers of the Soviet scene. For example, Suvorov's claim that the 8-K-84 missile—otherwise known in the West as the SS-11—is at once an ICBM and an ABM most assuredly will raise a few eyebrows, as will his claim that the Soviets build so many ICBMs to compensate in quantity for poor quality. Indeed, Suvorov can be fairly criticized for combining fact with fiction and the specific with the general. However, one should take note of two facts: first, many Russian émigrés seem to exhibit a proclivity to "fill

in the details" even when they have run out of facts; second, when Suvorov left the Soviet Union, he was a junior officer—probably a senior captain or junior major—and his rank would have limited the amount and detail of information to which he had been privy. However, the reader would be unwise to dismiss all Suvorov's claims out-of-hand; when coupled with his obviously intimate knowledge of Soviet deception practices, they raise serious questions about Soviet intentions and capabilities which can be ignored only at the greatest peril to Western security interests.

Within Suvorov's very readable chapters are many subjects of interest to the military reader. However, if one were to look for recurring themes, the list can be narrowed to four: the offensive, the rear, equipment, and *maskirovka* (camouflage, concealment, and deception).

The Soviet philosophy of war long has stressed the offensive.¹ Mass and surprise are the key words, and forward is the direction for movement. Suvorov acknowledges that nuclear weapons have "changed the face" of battle, but he holds that they have not changed the *principles* of Soviet military art. Forces still must be concentrated to complete the decisive breakthrough. However, because they become a tempting target for the enemy's nuclear weapons when they are massed, timing is more critical than ever. According to Suvorov, the Soviets plan on a five-stage "strategic offensive" to coordinate their attack and maximize their success: an initial nuclear rocket attack (30 minutes); a mass air attack in waves (90-120 minutes); a second rocket attack to flush the remaining Soviet missiles (30 minutes); front operations (10-20 days); and, finally, a breakthrough to attack the enemy rear defenses (7-8 days). Suvorov alleges that this offensive has one alternative form, called the "Friday evening offensive," which commences with a Soviet surprise attack at the fourth stage of the normal strategic offensive. (p. 167)

Tied closely to the offensive is the Soviet appreciation of the value of the rear. Suvorov

describes protective measures and *Metro* evacuation procedures for high-level leaders, civil defense capabilities, and the productive base of the Soviet Union. The Soviets do not intend to repeat the mistakes that led to their heavy losses in World War II. The rear has a dual significance: it is the supplier and lifeblood of the offensive and, at the same time, the recovery base for the Soviet state. Consequently, it now produces the equipment and supplies for the offensive, while girding to protect itself should nuclear war come. The Soviets regard the rear as highly important in warfare—a matter that we in the West tend to ignore.

In discussing Soviet equipment, Suvorov examines three aspects: quantity, type, and quality. Keying again on his earlier assertion that timeliness is essential in successful combat, Suvorov notes that quantity is necessary to capitalize on opportunity: thus, damaged equipment would be discarded unless it were easily repairable, and replacement equipment must be readily available. The type of equipment is dictated by Soviet military philosophy: simple, reliable, potent, and ground/tank-oriented. In fact, Suvorov alleges (quite credibly to anyone who has seen the Mi-24/Hind), the Soviets' love affair with the armed assault helicopter is occasioned by their view of it as a "flying tank"—faster, more maneuverable, and capable of operating in a different medium, but a tank nonetheless. Finally, the quality of Soviet equipment, Suvorov suggests, is significantly higher than Westerners believe it to be, although he claims that some of this quality (as in the case of ICBMs, for example) is due to the "importation" of advanced Western technology. Suvorov argues that some Western perceptions of Soviet technological inferiority derive from the Soviet practice of deploying and exporting equipment. Soviet export equipment, he notes, is "stripped down," and equipment carried by Soviet troops outside the Soviet Union (i.e., in Eastern Europe) is often a full generation or more old. In some cases, Suvorov claims, troops within the Soviet Union are not

issued new equipment; they train on parts of new weapon systems (an engine, a breech, and so on), while the actual systems are stockpiled unbeknown to any except the select few. Thus, he alleges, when the new weapons are used in combat, they will take the enemy by complete surprise.

This, then, brings us to *maskirovka*, literally "masking" or "camouflage." In both of his books, Suvorov refers repeatedly to the Soviet penchant for security and camouflage, concealment, and deception. According to Suvorov, all military activities are vitally concerned with this aspect of the military equation, from SALT negotiations down to subunit operations. His sections on the subject make for interesting and enlightening reading, especially when contrasted with our propensity to make everything a matter of public record and debate. For example, Suvorov finds it incredible that one of the most prominent figures in the Soviet SALT I delegation and one who smiled broadly during the signing ceremony in Moscow was the man he names as directly responsible for Soviet strategic deception—then First Deputy Chief, later Chief of the General Staff, Marshal N. V. Ogarkov.

Suvorov also touches on the question of the reliability of Soviet soldiers. He argues that in the event of war with the West, millions of Soviet soldiers would surrender to escape the oppressiveness of their system. The question naturally arises as to how the Soviets can contain such anti-Soviet sentiment and create an effective military machine. Suvorov's answer: The system exerts too many controls over the individual for him to rebel against the way things are; he must do as he is told or else risk the consequences. To use Suvorov's analogy, all Soviet "society finds itself in prison," with the Politburo "as the governing body of the prison," the KGB as the "warders," and the Army as the "guard" on the walls. (p. 269) Suvorov's description of the "strategic operation" also provides an answer to the question of how to control the troops: if the opponent's

territory is decimated by Soviet nuclear strikes, to whom will the unhappy Soviet soldier defect?

TAKEN together, *The Liberators* and *Inside the Soviet Army* make a valuable contribution to our understanding of the Soviet Armed Forces. Suvorov's extensive treatment of the Soviet military establishment in *Inside the Soviet Army* far exceeds the claims of the title. Coupled with the less vituperative approach to his subject, this comprehensiveness makes *Inside* the better of the two releases.

One can hope that Suvorov's works will find their way to a large audience in the United States and receive the critical attention they deserve. A few years ago, the name "Cassandra" was applied to Major General George Keegan, who repeatedly attempted to draw public attention to the realities of the Soviet military threat. While the name can be used derogatorily to describe a doomsayer (certainly the sense in

which it was intended by the chronicler of the general's travails), a Cassandra can also be a prophet whose warnings go unheeded, generally until it is too late. Although some of Suvorov's claims certainly can and should be challenged, particularly in those areas where he is speculating rather than relying on his firsthand knowledge of the Soviet military system, his obvious familiarity with the actual capabilities of the Soviet Armed Forces and the psyche of the Soviet officer corps make it imperative that his message be listened to. Perhaps then, we shall reevaluate our assessment of the aforementioned Cassandra also.

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Note

1. See, for example, A. A. Sidorenko, *Nastuplenie* (Moscow: Voenizdat, 1970), published in English as *The Offensive*, Volume One, USAF Soviet Military Thought Series (Washington: Government Printing Office, 1976).

KREMLIN CONTINUITY AND SOVIET SOCIETY

DR. CARL A. LINDEN

MACHIAVELLI in *The Prince* recalls with irony a conversation he had with Cesare Borgia, that Italian genius of guile and cruelty in the pursuit of power. Borgia told Machiavelli that all of his plans for winning and holding dominion in Italy were in place and only a step from success when he was struck down by serious illness. Thus it was with Yuri

Andropov, whose long-term project to exercise power in the Soviet Union was recently ended by illness and death before it had scarcely begun.

AS a result of Andropov's demise, the book by Vladimir Solovyov and Elena Klepikova moves from current to historical topi-

cality like a half dozen or so of other studies of the leader recently published in the genre of today's instant political biographies.† The question no longer is the urgent: Who is Andropov (about whom so little is known in the West)? Instead, it has become: Who *was* he? These observations are not intended to denigrate the authors' efforts: *Yuri Andropov: A Secret Passage into the Kremlin* remains well worth reading, containing much useful information on Andropov's career and including interesting reconstructions of his moves and machinations on the path to power. For the most part, the authors tie together the bits and pieces of accessible evidence in highly plausible ways. However, some of their connections and inferences are also open to considerable doubt and question. The authors were closely familiar for a number of years with the Moscow rumor mill that fills the information vacuum left by scanty or simply misleading or self-serving official accounts of the doings of Soviet leaders. The rumors themselves are part and parcel of Soviet politics and need to be taken into the account, though with great caution and wariness.

By contrast, the book by Victor Zaslavsky suffers no loss of newsworthiness.†† It is intended primarily as a scholarly work looking at the Soviet system as a whole in the Brezhnev years. Like Solovyov and Klepikova, the author is a former Soviet citizen now in the West, whose familiarity with the Soviet system is thorough and intimate.

On first glance, *Yuri Andropov* seems rather removed from *The Neo-Stalinist State: Class, Ethnicity, and Consensus in Soviet Society* in subject matter. The former focuses on the political character and career of Yuri Andropov, probing his acquisition of power as the leader of the Soviet Union and as Brezhnev's succes-

or. Primarily a political biography, it also has much to say about the contemporary Soviet political system. The latter book, in contrast, is not about an individual leader but is a work of political sociology. Political personality is its concern only so far as it mirrors the trends and characteristics of the Soviet system and society as a whole. Nonetheless, the reader will discover that the two books tell different parts of the same story. The takeover of the leadership by Andropov, the long-time chief of the secret police apparatus, was the sequel of the gradual reentrenchment under Brezhnev of the system's despotic control over Soviet society.

COAUTHORS Solovyov and Klepikova recount and, where there are gaps, reconstruct the history of Andropov's rise. They tell how he found an irregular, circuitous, and "secret passage" to supremacy in the Kremlin, ultimately outflanking and defeating Brezhnev's own choice as successor, Konstantin Chernenko. The ruling group, out of its instinct for mutual self-preservation, had heretofore kept the police chief on tap, not on top: the last individual who had tried to change this rule, Beria, was killed by his colleagues. Andropov, the authors show, overcame the resistance of the ruling group, avoiding such an ominous eventuality, by skillfully using the craft and coercion to which he committed such a large part of his career. He not only did not hesitate to violate the tacit agreement among Politburo members not to wash their dirty linen in public but hung out some of Brezhnev's own even before the ailing leader had left the scene (e.g., stirring up the scandal around his chief's daughter, Galina, and the questionable dealings of her friends).

In any case, the authors argue, Andropov's

†Vladimir Solovyov and Elena Klepikova, *Yuri Andropov: A Secret Passage into the Kremlin* (New York: Macmillan, 1983, \$15.95), 637 pages.

††Victor Zaslavsky, *The Neo-Stalinist State: Class, Ethnicity, and Consensus in Soviet Society* (New York: M. F. Sharpe, 1982, \$22.50), 208 pages.

rulership amounted to little more than the Stalinist regime in a new guise, supported by an ubiquitous secret police and rejuvenated by the new cadre of leaders brought into power by Andropov. The latter included new names now in the Politburo, such as Aliyev, Romanov, Gorbachev, and Vorotnikov. These, the authors say, are the "iron young men" whose ruthless drive to power under Andropov's aegis will mark their way of rule. According to the authors, they are bent on controlling the country by a "regime of fear" and draconian discipline. Similarly, say the authors, these new figures are quite capable of brushing aside ideological scruples and playing on the worst strains of Russian great-power nationalism in promoting a more aggressive foreign policy than Brezhnev did.

THE Zaslavsky book describes the systemwide trend toward reinforcement of the despotic socioeconomic structure of the regime. It tells how the Soviet party-state was returned to its basic Stalinist shape and structure under the aegis of the Brezhnev Politburo after it had disposed of Khrushchev's de-Stalinization, political relaxation, and reforms. Published shortly before Brezhnev's demise, *The Neo-Stalinist State* delineates the process of refurbishing the totalitarian police state. According to Zaslavsky, the thrust of state policy under Brezhnev was directed toward sustaining the atomization, isolation, and privatization of all individuals subject to the system. Thus, the regime sought to separate the classes of the countryside and the city (the former, deprived of both freedom of movement and material provision; the latter, less so, and thus holding a "better" position on the scale of deprivation) and to repress a self-assertion by ethnic and national groups within the Soviet Union and, above all, by the industrial working class.

Zaslavsky describes the mechanisms of control and regulation under Brezhnev which formed privileged sectors and groups and de-

termined opportunity for upward mobility. Foremost among the array of administrative barriers and permissions imposed were the universal internal passport system and the institution of "closed cities" with privileged access only. Zaskavsky indicated that such a revival of controls in the absence of mass physical terror could not have been achieved without endangering the Brezhnev rulership unless a kind of tacit compromise between the populace and the rulers had been struck. Specifically, the people accepted the arbitrary power of the rulers in return for job security, some workers' privileges, upward mobility, and improvement of living conditions. What was new under Brezhnev, then, the author suggests, was not the reinforcement of the despotic structure of the system but the concessionary policy that went with it (i.e., the added sugar coating over the same old bitter pill).

THE two books reveal the thread of continuity in Soviet politics since Khrushchev. The change from Brezhnev to Andropov was a matter of ruling style, not substance. What Brezhnev began, with Andropov's aid as KGB chief, Andropov worked to complete more fully and efficiently, namely, the reconsolidation of the rulership's despotic command of Soviet society.

Andropov's effort to establish an up-to-date model of Stalinism ended before it had scarcely begun. The man whom Brezhnev favored as successor and whom Andropov so rudely pushed aside, Chernenko, not only took charge of his rival's official burial but assumed his vacated office of general-secretary as well. However, Chernenko, an aging figure from the Brezhnev Politburo, also is very likely to be an interim leader. His success in gaining the prime place after his humiliating defeat at his predecessor's hands suggests a continuing rear guard action by the elderly wing of the Politburo against its new younger members. The result, for now, is something of a leadership stalemate and suggests a troubled transition in political generations.

What can be said then about the outlook for

the regime in the face of its many unresolved internal problems? Zaslavsky looks at this question from a different angle than is usual among Western observers. He questions the prevalent view that the regime can, with safety, place increased exactions upon today's Soviet citizens and short-change them materially simply because their expectations are very low in the first place. Rather, he argues that in the Soviet system's own terms these popular expectations are not at all modest, especially when one considers what is taken for granted by Soviet citizens.

Zaslavsky points out that the Soviet citizenry expects the state to keep prices for food, consumer goods, and services stable and unvarying. However, he notes, Soviet economic experts themselves have been saying that the system, as presently constituted, is no longer capable of keeping abreast of popular demands. In fact, he maintains, the decline in growth rates and living standards of recent years endangers the "organized consensus" that helped stabilize the Brezhnev regime—namely, popular acquiescence to its neo-Stalinist regime in return for meeting its material expectations. The great dilemma facing the rulers, according to Zaslavsky, is that they will not be able to meet even the seemingly limited material demands of the Soviet population of today without "a kind of revolution that would radically disrupt the existing political-

economic system" and the totalitarian power structure which that system undergirds.

Zaslavsky's analysis suggests that the Soviet rulers may soon find themselves in serious trouble if they prove unable to engage in a radical overhaul of the system. The Andropov portrayed in the Solovyov-Klepikova book evidently was not attempting such a task but was applying his reputed intelligence to refining, not reforming, the existing structure. Andropov, who, according to our authors, liked to work out a detailed plan for any major action he contemplated, nonetheless typically failed to take sufficient account of changed circumstances or unexpected turns in affairs.

Do his successors possess greater foresight than Andropov or a greater ability to act flexibly, given the rigidities and present bureaucratic inertia of the Soviet system? Chernenko certainly does not appear to have the longevity, energy, or genius to initiate or complete a new venture in regime policy and practice. Thus the regime's potential for coming to grips with the internal difficulties that have been building in the Soviet Union since the last phase of the Brezhnev era remains in doubt. If it does indeed exist, it may well remain in a state of suspense, at least as long as Chernenko sits as head of the regime.

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POTPOURRI

The Presidency of Lyndon B. Johnson by Vaughn Davis Bornet. Lawrence: University Press of Kansas, 1983, 416 pages, \$25.00 cloth, \$14.95 paper.

"History will judge," declared Lyndon B. Johnson after his five event-filled years in the White House. (p. 330) Yet a decade and a half later, historians still seem no closer to determining Clio's verdict. It is difficult to assess the Johnson years, according to this new study by Vaughn Davis Bornet, largely because on the home front the President's "rhetoric" of "total oversell" (p. 219) had raised hopes to unattainable heights, while in foreign affairs his attempt to make South Vietnam into an independent noncommunist state proved impossible because of the President's own restraints on the military. Thus by Johnson's high standards, neither the Great Society nor the Vietnam War fulfilled the administration's objectives. This double failure was all the more tragic, Bornet notes, because Johnson possessed the talent to translate many of his lofty hopes into reality. In civil rights, the War on Poverty, federal aid to education, and medical care for the aged, disabled, and poor, "this presidency made a difference." (p. 329) Perhaps after the emotions are spent and reason returns, historians will listen to Clio's judgment.

Vietnam was Johnson's albatross, Bornet declares, because the President chose to wage an "open-ended" war "for democracy and against communism without having the goal of quick military victory." (p. xiii) Johnson helped to create his own credibility gap by not keeping the American public informed about the extent of this nation's military involvement in Vietnam. From the earliest days of U.S. entanglement, he knew the war was not going well and that there was little hope for immediate improvement. Yet he rejected an early suggestion for the "neutralization" of Vietnam, fearing that such a scheme would lead to the "communization" of that country, along with Laos and Cambodia. (p. 66) Furthermore, Bornet notes, Johnson never engaged in cabinet discussions of strategy in Vietnam or of the details of America's involvement. Instead of authorizing a fundamental reassessment of the Vietnam situation, he quickly ordered a continuation of Kennedy's half-way policy and ultimately escalated that commitment. Why? Because, as Hubert Humphrey later observed, Johnson firmly believed that "aggression unchecked was aggression unleashed." (p. 66)

The author makes many debatable assertions, as one might expect in a work covering such a controversial presidency. On Vietnam, Bornet believes that a congressional declaration of war would have allowed "censorship at the scene of battle," "a drawing together of the nation," (p. 263) and a chance for the government to build a "solid moral case" for the war. (p. 264) Yet one wonders if the President could have convinced Americans that the matter was one of national peril. Johnson's own erroneous assumptions about Vietnam, Bornet admits, undercut his capacity to act. Despite prevailing beliefs among U.S. deci-

sion makers, North Vietnam did not have "a small, backward, and primitive military force"; its "logistical basket" was "virtually bottomless" because of Soviet and Chinese aid; and its willingness to accept "horrendous losses" made America's "war of attrition" a hopeless strategy. (p. 85) Johnson was also "no match for slick TV" and the rest of a hostile news media. (p. 265) Finally, the President was hampered by opponents of the war, who, according to Bornet, raised a "hysterical challenge to authority wherever it might be," (p. 256) worked from the "palpably false assumption that they were representative of a thwarted American majority against the war in Southeast Asia," (p. 311) and were responsible for a "full literature of excess . . . by New Left writers, Communists, and 'progressives' who were allied actually or spiritually with the Soviet Union, China, or Trotsky and by some who were just fuzzy of thought—though famous." (p. 258) Yet contrary to traditional accounts, Bornet insists, "campus radicals" and events in Vietnam did not drive Johnson from office. (p. 311) As early as August 1964, Johnson had been considering not running for a second term because of ill health. His withdrawal on television on 31 March, Bornet explains, "was engineered to obtain a useful payoff for the nation, while still not revealing the state of his health." (p. 298)

Readers may not always agree with Bornet's assessment of the Johnson presidency, yet they will acknowledge it as the most complete account to date. As part of the American Presidency Series, this volume is a welcome addition to the growing literature on the 1960s. Bornet's organization is questionable and he is seldom objective about Vietnam, but historians will have to grapple with his work if they hope to understand that tumultuous decade.

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Pieces of the Game: The Human Drama of Americans Held Hostage in Iran by Colonel Charles W. Scott. Atlanta, Georgia: Peachtree Publishers, 1984, 402 pages, \$14.95.

When a book is written by a military and scholarly authority who, as a hostage held in Iran, participated directly in an event that paralyzed the United States for over a year, expectations are high that a deeper than normal insight into the hidden story might be gained. Certainly, Colonel Charles W. Scott's credentials are impressive. As a U.S. Army Infantry officer, he was selected for the Army's Foreign Area Specialist Program on the Middle East. His formal education was supplemented by his study of Farsi (the language of Iran) at the Defense Language Institute, a service tour in Iran as the Middle East Desk Officer in the Defense Intelligence Agency, and experience in several other infantry and intelligence-related assignments. In

view of his distinguished record, Colonel Scott's failure to make an original contribution to our understanding of the internal dynamics of the Iranian hostage crisis is disappointing.

This fundamental flaw perhaps can be traced to Colonel Scott's own "romantic" bias toward Iran, for he demonstrates clearly his great love of traditional Persian literature and ancient Persian history. It is also evident that Colonel Scott's understanding of Iranian mores was biased by his almost exclusive contact with the wealthy, influential upper class.

These two prejudices—romanticism and elitism—prepared Colonel Scott poorly for viewing other Iranian aspects and perspectives, namely, the poor (depicted as dirty, unaccustomed to eating meat or using indoor plumbing, and exhibiting anomie); the middle class (frustrated by the dearth of economic opportunities and by the lack of political participation); and the mullahs (distracted by the rapid pace of socioeconomic change, the influence of Western values, the influx of foreigners, the suffering of their people, and the seemingly hard-heartedness of a corrupt government. If anything, Colonel Scott's account illustrates the tragedy of experiencing only a small part of a culture and then constructing a paradigm (based on illusions) to guide one's action. In fact, Colonel Scott appears bewildered throughout much of his book: he cannot quite understand why Iranians act the way they do.

The bulk of *Pieces of the Game* consists of painstakingly detailed descriptions of minutiae: the decor of every room he had ever been in, the blow-by-blow accounts of attempts to gain access to toilet facilities, awkward injections of Farsi phrases, etc. However, bits of valuable information, do surface sometimes: for example, the "inside story" about why one hostage, Sergeant John Subic did not receive a decoration for the ordeal. Scott details how Subic ignored the Military Code of Conduct and actively aided the Iranians who seized the embassy. Subic's assistance began just hours after the seizure of the embassy, when he accompanied the Iranians to identify all the hostages and provide key information about them, such as language fluency, friendships with Iranians, and job details. Scott provides many details about Subic's aid to the Iranians throughout the ordeal.

Overall, the work is tedious and exhausting, although Scott certainly demonstrates how the hostage experience elevates small everyday occurrences to high drama.

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Red Flag over Afghanistan: The Communist Coup, the Soviet Invasion, and the Consequences by Thomas T. Hammond. Boulder, Colorado: Westview Press, 1984, 261 pages, \$11.95 paper, \$26.50 cloth.

This is an excellent book about Afghanistan and Soviet and U.S. policy toward that troubled nation since the overthrow of the government in the Communist coup of April 1978. Professor Thomas Hammond brings to bear a wealth

of experience in the study of Soviet policy. He makes extensive use of previously classified documents and of interviews of high-level officials of the Carter administration, diplomats and specialists knowledgeable about Afghanistan, and Afghan émigrés.

Hammond is critical of the policies of the Carter administration. He condemns the apparent confusion in Washington and in the U.S. Embassy in Kabul regarding the nature of the government that overthrew Mohammad Daoud. Even after Ambassador Adolph Dubs was killed in February 1979, American aid continued, although it was reduced. Hammond believes the mild opposition to the Communist takeover was a mistake and may have encouraged the eventual Soviet invasion.

The Carter policy toward the Soviet invasion is criticized on three counts: failure to realize until the last minute that an invasion was coming, failure to issue a credible warning to the Soviets, and failure to inform the American public promptly of Soviet preparations for the invasion. Had the U.S. President warned the Soviets of steps he might take (Hammond suggests Carter could have mentioned the ones he actually took after the invasion), the Soviets may have been deterred from invading. At worst, a U.S. warning would not have hurt any more than the aftermath measures.

The record of Communist takeovers indicates a preference for gradual reform under initial cover of a broad national front. However, the Afghan government attempted to impose radical reform quickly and brutally, arousing the wrath of the people. The inability of the Communists to rule effectively led the Soviets to take a more active role in running the government and fighting the resistance. Hammond thinks the Soviets "may have begun" to consider military intervention as early as spring 1979 but "probably made [the] decision in October."

In light of Soviet history, Hammond finds nothing new about the Soviet invasion, a more frequent act in Afghan history than is commonly realized, for the Soviets invaded Afghanistan in 1925, 1929, and 1930 also. "The only surprising thing about the invasion," says Hammond, "was that a number of top U.S. officials were surprised, . . ." While the invasion was "probably influenced by many factors," the main ones were the determination to have a cordon sanitaire to the south and to maintain the Brezhnev Doctrine.

Dr. Hammond is pessimistic about the prospects for a Soviet withdrawal. Citing the Soviets' scorched earth tactics and "migratory genocide," he doubts that the resistance movement will succeed. Although he predicts that the Soviets probably will move cautiously for a time, he anticipates that they eventually will seek to take advantage of the improved geostrategic position which their presence in Afghanistan provides. He argues that it is imperative for the United States to give arms to the *mujahideen* in their interest and our own. If the United States does not aid, he believes, its credibility will be lost. Nevertheless, he is callous about the plight of the Afghans and states that "our main goal should not be to get them [the Soviets] to withdraw; rather our chief goal should be to discourage them from invading other countries . . ." It is imperative, he believes, that the Soviets be convinced that peaceful relations between the United States and the Soviet Union is

"the most important objective of all."

Hammond writes convincingly of American perceptions and policies but is less successful in documenting his analysis of Soviet reasoning. His comments about the Soviets are qualified by "probably," "apparently," "may have been," and so on. For example: "How much influence military leaders have on Politburo decisions is *unknown*, but *it may be* that some of the top officers helped to persuade the Politburo to favor the invasion." (Emphasis added.)

Red Flag over Afghanistan is a perceptive study, and I highly recommend it for anyone interested in Southwest Asia and the interplay of American and Soviet policy. Its suggestions for U.S. policy are pertinent to all American servicemen.

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The Shadow Network: Espionage as an Instrument of Soviet Policy by Edward Van Der Rhoer. New York: Charles Scribner's Sons, 1983, 359 pages, \$17.95.

Over the past decade, Soviet espionage has become an increasingly popular subject for Western writers. John Barron's much acclaimed *KGB: The Secret Work of Soviet Secret Agents* (1974) marked the beginning of a surge of interest in the foreign activities of the KGB. The growing publicity about covert KGB operations abroad in the late seventies and the appointment of former KGB Chairman Yuri Andropov to succeed Brezhnev in November 1982 fueled further interest in the KGB. The KGB's multifarious foreign activities are a crucial aspect of East-West relations and deserve to be studied closely. Unfortunately, however, much of the recent literature on the subject has added little to our knowledge. This is certainly true of *The Shadow Network* by Edward Van Der Rhoer, which suffers from numerous weaknesses.

Van Der Rhoer's purpose, judging from the subtitle, is to describe how espionage is used as an instrument of Soviet policy. Yet aside from some short introductory chapters, in which he attempts to outline the history, functions, and purposes of the Soviet state security apparatus, the author concentrates mainly on biographical sketches. He discusses the various heads of the Secret Police from Dzerzhinsky onward and then gives the personal histories of several well-known Soviet spies. In presenting these biographies, he does not attempt to draw conclusions about how the activities of these individuals were related to Soviet foreign policy objectives at the time, nor does he relate what was going on at the higher levels of the police and party leadership.

Almost all the spy stories included have been told before, and Van Der Rhoer relies mainly on secondary sources or on well-known firsthand accounts by former Soviet intelligence officers, such as Deriabin, Orlov, Krivitsky, and the Petrovs. For anyone who has read the original accounts (which have all appeared in English), Van Der Rhoer's book will offer nothing new. Similarly, the chapter titles chosen by the author ("The Spy Who Reported to Stalin,"

"The Spies Who Came in from the Cold," "The Man Who Rose from the Dead," etc.) ring strikingly familiar, particularly if one has read other books on the subject, such as Joseph Newman's *Famous Soviet Spies* (1973).

The book is flawed also by Van Der Rhoer's failure to footnote key passages. For example, he provides no source for his claim that in October 1964 Shelepin and Semichastny "sealed off Khrushchev from the outside world in the state dacha at Pitsunda, where he was on vacation, so that his supporters could not warn him about plans for a coup." (p. 49) There are also some serious factual inaccuracies in the book. For example, the author states that the head of the state security organs, "like Dzerzhinsky, is usually a member of the CPSU Politburo." (p. 3) In fact, Dzerzhinsky was only a nonvoting (or candidate) member, and the party has had a deliberate policy of excluding police chiefs from this body. (There have been only two exceptions, Beria and Andropov—and Andropov's elevation to full Politburo membership was viewed as an anomaly by many observers.) The author claims also that the Soviet wartime military counterintelligence organization, SMERSH, was headed by Sergei Kruglov (p. 34), although it is well known that the notorious Abakumov was its chief, while Kruglov served as one of his deputies. Such mistakes can probably be explained by Van Der Rhoer's failure to go beyond easily accessible Western sources and avail himself of the numerous Soviet sources available on the history of the state security organs. Given the importance of the KGB and its predecessor organizations to our understanding of the Soviet Union, one hopes that some well-researched, scholarly publications on the subject will emerge in the near future. This book fails to meet that mark.

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The Soviet Control Structure: Capabilities for Wartime Survival by Harriet Fast Scott and William F. Scott. New York: Crane, Russak and Company, 1983, 146 pages, \$7.95.

This book is mandatory for military analysts, policymakers, and anyone concerned with national security affairs. William F. and Harriet Fast Scott have pioneered the U.S. examination of the Soviet military and have produced two major books, *The Armed Forces of the USSR* (1981) and *The Soviet Art of War* (1982), which have expanded remarkably our understanding of the Soviet Armed Forces. *The Soviet Control Structure: Capabilities for Wartime Survival* is a logical expansion of their examination of the subject. In content and depth of research, it compares favorably with their previous books in that it relies heavily on previously untranslated Soviet sources and materials. Its analysis is equally incisive, logical, and accurate.

The authors begin by placing their subject in its historical context. They note that today's Soviet leaders, having survived the purges of the 1930s and the starvation and devastation of World War II, have perfected a system of control begun by Lenin and exploited by Stalin in order to

perpetuate their control of the populace. Stressing that such control has obvious benefits in wartime, the Scotts then focus on the structure of the Soviet control system. Beginning with the agencies of the Communist party and government and then broadening their discussion to include the KGB, MVD, Armed Forces, and Civil Defense establishments, the authors examine the diverse and redundant elements in the Soviet control structure, including the trade unions, "volunteer" groups, and legislative measures, such as martial law. In so doing, the authors provide valuable insights concerning Soviet civil defense preparations, command and control responsibilities, and the psychological indoctrination of the population for the possibility of nuclear conflict. The conclusions that the Scotts reach are modest. Noting that the structure functioned poorly in the opening days of World War II, the authors stress that today's structure must contend with potential enemies along the Soviet borders. They admit that an exact judgment of the system's value is not possible but conclude that the extensive control inherent in the system must be assessed as a strength in Soviet capabilities.

This book, which contains the only comprehensive examination of the Soviet control structure now available, should receive the widest dissemination. *The Soviet Control Structure* is ideal as a text for courses on the Soviet Armed Forces, should be mandatory reading at all war colleges, and should be part of the personal libraries of all who are interested in the Soviet military.

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Buying the Night Flight: The Autobiography of a Woman Correspondent by Georgie Anne Geyer. New York: Delacorte Press, 1983, 337 pages, \$16.95.

The press is not very popular among elements of the military community, and historically the military-media relationship has been an uneasy one. Military actions in Vietnam, Angola, Lebanon, the Falklands/Malvinas, and Grenada have been reported and interpreted by the world press, but not always to the satisfaction or perceived self-interest of the military community.

For those of us who believe much of the press has gotten a bum rap for admittedly tough assignments, *Buying the Night Flight* is a timely recommendation to our military audience. Georgie Anne Geyer, within the small profession of foreign correspondents, writes consistently competent and insightful columns on some of the world's most intractable conflicts. Moreover, she is no stranger to the professional military education community, having appeared on the podiums of all war colleges since the 1960s. As a professional journalist, she writes as neither friend nor foe of the military profession. Her reportage is straightforward, sensitive, and invariably comprehensive.

Geyer is a tough, gutsy columnist from Chicago's South Side who made it early in a profession long dominated by men. She graduated from Northwestern University, speaks four languages, and has been covering foreign news for twenty years. She takes the reader through politico-military crises from Santo Domingo to Santiago, Moscow to

Luanda. Especially revealing are her personal vignettes of Fidel Castro, Ayatollah Khomeini, and Lech Walesa, which both inform and flesh out their premier roles in key revolutions of our time. Her book, like her columns, allows the reader to hear not only the words but the emotions of those she interviews—one of the skills of a topnotch reporter. Geyer also interprets news in the context of the culture from which it springs, often with the backdrop of national history, and frequently with an eye toward the social distance separating people from cataclysmic events. This comprehensive approach gives the reader the context necessary to judge either the uniqueness of specific events or the implicit pattern underlying them.

Her anecdotal accounts also surface: the advantages and disadvantages of a woman reporting war and peace, struggle, and status quo. There is no room for husband and family, and she has little leisure time for hobbies. Her vocation is her avocation. Female career officers will recognize immediately the gnawing choices inevitably posed by a career.

The military professional needs to read a book like Geyer's to appreciate the expertise of competent foreign news reporters. Her account is light, adventurous, arm-chair relaxation. It makes for good reading and historical perspective on a rainy or wintry night.

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The Strategic Imperative: New Policies for American Security edited by Samuel P. Huntington. Cambridge, Massachusetts: Ballinger, 1982, 326 pages, \$27.50.

Professor Samuel Huntington, Director of the Center for International Affairs at Harvard and prominent scholar in national security studies, served on the National Security Council staff in 1977-78. All but one of the other contributors in *The Strategic Imperative: New Policies for American Security* are associates of Huntington at the Harvard Center. All were chosen because they offered original and useful ideas rather than thoughts in accordance with a master plan.

The opening chapter sets the stage for the renewal of American strategy for the 1980s based on four trends that Huntington foresees: first, the development of the Soviet empire and its simultaneous external expansion and internal decay; second, the declining effectiveness of nuclear deterrence and increasing dependence on other forms of military force; third, the multiplication of the needs for deterring Soviet actions in the Middle East, against China, and in some circumstances, against the Eastern European countries; and fourth, the probability of Soviet-American war during the decade, due to a shifting balance in favor of the Soviets, an overlap of conflicting interests, and increasing instability and upheaval. He believes that much more diversified deterrence strategy than we now have is clearly indicated.

Aaron Friedberg's superb essay on the evolution of U.S. strategic doctrine, published earlier in the *Journal of Strategic Studies*, December 1980, merits repeating for a wider audience. His evaluation of past strategies strongly sug-

gests the need for new targeting objectives flowing from a more unified doctrine. Richard Betts further broadens the discussion of the political and military meaning of the nuclear balance and the equivalence policy. Stephen Rosen makes a case for civil defense and a ballistic missile defense system, writing, apparently, before High Frontier and the current "star wars" programs evolved.

A particularly useful study for the war college student or military planner is Eliot Cohen's reappraisal of systems analysis. The author believes that the systems analyst neglects study of war as a unique phenomenon that requires application and experience in order to be understood. Using Clausewitz as his authority, Cohen decisively rejects systems analysis with its overconcentration on technology, favoring a Clausewitzian-style study of war and preparation for war—i.e., emphasis on strategy, tactics, technology, and psychology. A vital need would be a better educated officer corps, strengthened by war college training in a quality, two-year study of war. Both his citation and interpretation of Clausewitz are inaccurate, but the message is indisputable.

Excellent discussions of Third World conflict and a concluding essay on energy security strategy round out this high-quality study. Well written in nontechnical language and featuring a comprehensive bibliography and helpful index, *The Strategic Imperative* is a book that the student of strategy will find thoroughly rewarding.

Dr. Paul R. Schratz
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Another Part of the Fifties by Paul A. Carter. New York: Columbia University Press, 1983, 328 pages, \$19.95.

Paul A. Carter, a University of Arizona professor of history and author of *Another Part of the Twenties* (1977), promises the reader a reassessment of the culture of the fifties because "there is a gap between image and experience comparable to the gap in our understanding of the twenties between a sloganized 'Jazz Age' and for many people, quite a different period." He examines subject matter as diverse as science fiction, Supreme Court decisions, the rise and fall of McCarthyism, the socioreligious beliefs of Reinhold Niebuhr and Paul Tillich, the ideas of various thinkers (William Whyte, David Riesman, and Eric Hoffer, for example), and the pervasive influence of the atomic bomb on American society. But this attempt to recreate the mood of the fifties gives undue emphasis to science fiction, while he virtually ignores such phenomena as Elvis Presley, Marilyn Monroe, and James Dean.

In his examination of the political life of the period, Carter ties the fifties to the eighties. In so doing, the author emerges as a sixties-type academic liberal. It is difficult to determine whether Carter wrote the book to paint a portrait of the fifties or to deliver a partisan blast against the current administration, passing his perception off as history. While a scholar of history may be concerned about the quality of presidential candidates and may be dissatisfied with an administration and its policies, in this frequently irritating book, Carter abuses the historian's license. He turns the study of the fifties into an attack on those who

took office twenty-five to thirty years later.

Throughout the book, Carter consistently places himself on the "proper" side of all issues whether that be opposing nuclear war or the actions of Senator Joseph McCarthy or favoring civil rights, the United Nations, and feminism. For example, he unfairly lambasts Adlai Stevenson for his 1955 Smith College commencement address, using 1983 equal rights values to judge Stevenson's statements about the role of college graduates. Stevenson may not have foreseen the future changing role of women, but how many leaders—men or women—in the 1950s did?

Carter joins a number of other writers who now view President Dwight D. Eisenhower in a more positive vein. He believes that the 1959 Antarctic Treaty was one of the overlooked high points of the Eisenhower administration and that the news media seemed virtually unaware of its existence. Carter also considers Eisenhower more of an international risk-taker than what has usually been perceived. His atoms for peace program and his equally adventurous "open skies" proposal were giant steps forward in the international peacekeeping arena.

Carter promised "another part of the fifties," but he delivers a very small part. When he manages to recreate the mood of the times, as in the chapter "Under God, By Act of Congress," his history is on solid ground. However, more frequently, he resorts to polemics. Carter may wish to read Margaret W. Rossiter's *Women Scientists in America: Struggles and Strategies to 1940* to see how an excellent writer, perhaps angered by the evidence her work uncovered, used the tools of her profession to convey a disciplined message. Unfortunately, the culture of the fifties still requires a reassessment.

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Nicaragua: America's New Vietnam? by Karl Grossman. Sagaponack, New York: Permanent Press, 1984, 228 pages, \$16.95.

As an investigative journalist from Long Island with little or no prior experience in Central America, Karl Grossman decided to fly down to the region and poke around. The result is *Nicaragua: America's New Vietnam?*

Grossman has a journalist's ear for detecting the nuances of language, for asking good questions, and for nosing out what may lie beneath the rhetoric. He interviewed, it seems, virtually everybody with whom he came into contact, from his fellow passengers on the jet to Tegucigalpa to ambassadors, *contras*, and women Sandinista soldiers. He quotes liberally and perhaps even unfairly. During one interview, for example, U.S. Ambassador to Nicaragua, Anthony Quainton, stated that Grossman could quote him as a "western diplomat." The author makes jest of that understanding and quotes from his conversation with Quainton directly over the course of the next few pages.

There are other flaws in the book, the most serious coming when Grossman assesses the potential for a Vietnam-style war in the region. He labels the U.S. presence in Nicaragua—supporting the *contras*, most in particular—

as illegal, immoral, and impractical. To the author's credit, he does not hide opinions and facts presented by those in opposition to the Sandinista Revolution. He quotes as liberally from them as from its most ardent supporters. The record he presents is thus mixed. He gives all a free hand in expressing sentiment, opinion, or facts and does so in a pleasant, breezy manner. He is not unafraid to lambast old friends. When he sees evidence of the sale of Israeli weapons to the *contras*, he condemns Israel, even though he himself is Jewish and an admitted long-time admirer of the Jewish state.

Nevertheless, Nicaragua is not America's new Vietnam. History does not repeat itself, although it can occur in remarkably similar cycles. What Grossman ultimately expresses are his perhaps unchanging attitudes and those of fellow Americans, who divide the world into neat moral categories, labeling a presence in Vietnam or Nicaragua as immoral, or, conversely, appropriate and necessary for the preservation of freedom and democracy. Yet the author is, in fact, just as guilty in his quick judgment as those he attacks.

Despite its grossly ethnocentric points of view, the work provides many insights through the words of others into a violent and beautiful part of the world that we are involved with intimately. I recommend reading this account, but with caution. If the reader discards some of his most hysterical conclusions, he will find a colorful portrayal of the region and its principal actors. *Nicaragua: America's New Vietnam?* will form part of the historical record, but it prejudices too blithely and blindly.

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Vietnamese Tradition on Trial, 1920-1945 by David G. Marr. Berkeley: University of California Press, 1981, 450 pages, \$25.00.

David Marr's *Vietnamese Tradition on Trial, 1920-1945* while not directly a sequel to his earlier excellent book *Vietnamese Anticolonialism, 1885-1925* (1971), is a natural follow-on to this work. As Marr himself writes, he "identified eight intellectual topics for discussion," and his writing style reflects this philosophical approach to the Vietnamese past. These topics are The Colonial Setting, Morality Instruction, Ethics and Politics, Language and Literacy, The Question of Women, Perceptions of the Past, Harmony and Struggle, Knowledge Power, Learning from Experience, and Conclusion. These discussions, to use a colloquialism, will go far in helping the reader to understand "where the Vietnamese are coming from."

This is a very useful and readable book—required reading for the specialist, but lively, lucid, and eminently readable for the general reader who wants to understand what contributed to the Vietnamese "national essence."

Well-organized and thoughtfully presented, this historical account helps to explain the beliefs, values, and cultural depth of the Vietnamese, all of which have survived centuries of recurring adversity. Americans, on the whole, have never understood any of this, and Marr's book will

help somewhat to shed some light on this subject. Scholars will appreciate the copious footnotes; the general reader may ignore these and suffer no loss in understanding more about a new powerful force in the world.

For those who wish to dig deeper, Marr touches on the diverse roots of the Vietnamese—their older Taoist, Confucianist, Neo-Confucianist, and Buddhist inheritance; the growth of the newer, localized sects like the Cao Dai and Hoa Hao; and the effects of social Darwinism on Vietnamese intellectual thought.

The Indochinese Communist Party was the beneficiary of some extraordinary good luck along the way to success, yet its own sense of where history was going (in the reading of the contradictions of the times) was important to that success. Their leaders' scramble to attach themselves to the peasant uprisings in 1930 comes out well in this book; what is not quite so clear is the crucial importance of the help given to the party by that naïve and unsophisticated American OSS team, led by Archimedes Patti, whose members even today appear not to understand what happened in Hanoi in 1945, or why it happened, and what impact those events have had on subsequent Vietnamese (and American) history.

There are a few nit-picks with the work; these concern loose editing and do not detract from the considerable value of the book. A peculiarly American trend to flaccid writing ("humankind" versus mankind) can be found also.

For the specialist, there is a cautionary flag raised when Marr uses such persons as Tran Van Giau as primary sources. Tran Van Giau, the Party's Chief in Cochinchina when British General Douglas Gracey and the Allied Forces arrived in Saigon in 1945, displayed a consistent tendency to violence, and this propensity got his Vietminh expelled from Saigon by Gracey; Giau himself was recalled to the north by the party soon after. In the view of those who closely follow Hanoi, he has since been assigned duties as a writer of minor histories.

David Marr may be a little hard on those Vietnamese who, in accordance with their Confucian indoctrination and upbringing, accepted the French conquest as their fate and attempted to work within the colonial system for their own security or to better the lot of their countrymen. To these Vietnamese, many of whom were as patriotic as anyone else, Marr assigns the term *collaborator*, which he uses throughout the work. Given Marr's own politics and his unique access to Vietnamese culture, such uncompromising positions are understandable, but a true picture may not emerge from tarring everyone with the same brush. For example, following this line, all native officers and officials in the famed Indian Army and equally famed Indian Civil Service who worked with the British *raj* in India would be called collaborators. However, many of these were patriots who used their various skills to build the world's largest democracy after independence and never lost their identity along the way. Were these Vietnamese "collaborator mandarins" any worse than Ho Chi Minh, who for three decades obediently served the Comintern and during that time stayed out of his own country? Many would argue as to who were the real betrayers of the Vietnamese people, and this persistent name-calling does tend to drag the book down a peg.

Although these comments are not directed specifically at any particular author, a number of younger scholars are caught in a Catch-22 situation. They opposed the Vietnam War (and there is nothing wrong with that), and today they are allowed into Vietnam. However, the party does not grant entry into Vietnam to those scholars who are overly critical of the Communist regime. Yet it is impossible to write a truly honest and scholarly appraisal of recent events in Vietnamese history without being critical of every actor who has ever walked on that stage—including the Communists. Thus, no matter how incisive the analysis or how good the history, these scholars can only write as does Marr in this book: "It is reasonable to ask whether, after more than three decades of slaying giants, the Communist Party of Vietnam has today lost some of its capacity to respond to popular urgings." While one may ask how frequently did the party, in fact, *ever* respond to popular urging (as opposed to manipulating them), one should note that these writers can only ask the question; they are unable (as in this work) to answer it. It is thus of interest to note that much of the criticism of the present corruption of the revolution comes from the Vietnamese regime now in power, not from the American (or other) academics who are permitted to visit that country.

Vietnamese Tradition on Trial is a significant contribution to the growing literature on Vietnam. It should be read by anyone interested in the history of a once-small nation that has become a household name in this country.

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Visions of Vietnam by James McJunkin. Novato, California: Presidio Press, 1983, 250 pages, \$25.00.

Visions of Vietnam is a collection of photographs by former U.S. Army correspondent James McJunkin and line drawings by former U.S. Air Force illustrator Max Crace. It is not, as the flyleaf promises, "a graphically brilliant book." On the contrary, it is a collection of surprisingly mediocre photographs interspersed with better, but certainly not "gripping," line drawings. Both artists depict the American soldier, his Vietnamese counterpart, and a sampling of Vietnamese civilians. Only Crace's line drawings depict them well.

McJunkin's photographs are a mere cut above the scrapbook/snapshot variety. His strangely static and often posed shots of soldiers and civilians evoke little sense of action or feeling. Quite often, his subjects are shot against annoyingly cluttered backgrounds, with uniforms and faces barely distinguishable from tanks, trees, and buildings. Certain combat photographers—Larry Burrows for example, or even Tim Page on a good day—could turn a certain amount of obscurity into art. McJunkin is not in their class. While effective photographers bore into their subjects, capturing pains and fear and joy as it is reflected, up close, on faces, McJunkin never gets close, physically or emotionally, to his subjects. His resulting photographs are neither art nor documentary. They are simply pictures.

I was also disappointed by the quality of the black-and-

white photo reproductions. Either the Army did not train McJunkin adequately on the intricacies of f-stops and shutter speeds in the field, or it failed to introduce him to quality printing procedures in the darkroom. Certainly, the publishers did not insist on quality prints for the book. With few exceptions, his photographs are under- or overexposed, grainy, and occasionally blurred around faces. Most lack contrast and slide into shades of gray. All in all, McJunkin's photographs contribute little to the graphic history of America's days in Vietnam.

The saving grace of *Visions of Vietnam* is Max Crace. His line drawings (of basically the same subjects) supply some of the intimacy and emotion that McJunkin's photos promise but don't deliver. Crace's drawings, with a few exceptions, have detail, clarity, contrast, and emotional depth. He moves in on his subjects and captures a range of real feelings, transforming several of his pen-and-ink sketches into vivid portraits of men in combat. Ironically, Crace's drawings are much more evocative and "real" than McJunkin's real-life companion photographs. They do not, however, save this \$25.00 book.

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Touched with Fire: The Future of the Vietnam Generation by John Wheeler. New York: Franklin Watts, 1984, 259 pages, \$16.95.

Touched with Fire is an emotional, personal attempt by a Vietnam veteran to explain the long-term impact of the Vietnam War on America in the 1980s. "The great issues in our time," John Wheeler writes, "will be impenetrable if we do not sort out how our passage in the Vietnam War years is shaping each of us." (p. 4) Wheeler served in Vietnam from June 1969 to June 1970 and played a prominent role in bringing about the Vietnam Veterans Memorial in Arlington Cemetery. His revisionist account is part of the increasing number that praise the integrity of those who served in Vietnam. Wheeler argues that everyone who came of age in the 1960s was touched by the fire of Vietnam, and that this shared experience unites veterans with those who opposed the war or tried to avoid the draft. His point is well taken. However, Wheeler, a West Pointer, is better at explaining the sincerity of those who fought than in sympathetically portraying the actions of protesters.

Wheeler obviously is a devout Episcopalian, but even fellow-Episcopalians will find his religious fixation overdone. (I do not believe the rites of the Episcopal Church have much to say about how a generation of Vietnam veterans can come to terms with their collective past.) Wheeler's wife is an ordained Episcopal priest; their twins were born with serious birth defects, which Wheeler fears stem from his possible exposure to Agent Orange. He is a troubled man sincerely attempting to understand a society that scorned him because he accepted a responsibility which that same society asked him to undertake. The confessional style of this utterly humorless person is overdone; every reader will tire of learning about how well Wheeler's

small circle of Washington lawyer friends (all Vietnam veterans) are doing.

Touched with Fire is presented in a curious circular fashion so that ideas are not logically developed, yet scattered throughout the book are important ideas, which others will want to develop further. For example, Wheeler believes that Vietnam, by helping make the very concept of masculinity somehow suspect, ironically helped improve professional opportunities for women in America. He also has some valuable things to say about how antiwar songs in Vietnam actually helped bond soldier together. He treats sympathetically the problems of women back home who were treated as pariahs by friends because their husbands served in Vietnam. And he wants his readers to know the vast majority of success stories for those who made the transition from Vietnam to civilian life.

Wheeler concludes that Vietnam veterans are, as a group, good; that masculinity, as a trait, is good; that America faces foreign enemies who may again require our sacrifice of soldiers; and that there are causes for which it is worth dying. The book is worth the attention of anyone struggling to understand the relationship of Vietnam to the activism of blacks and women.

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Reappraising Defense Organization: An Analysis Based on the Defense Organization Study of 1977-1980 by Archie D. Barrett. Washington, D.C.: National Defense University Press, 1983, 325 pages, \$6.00.

According to author Archie Barrett, this volume was written to put into better perspective the various studies that examined the issue of reorganizing the Department of Defense. The primary study from which data were drawn was the Defense Organization Study of 1977-1980. Other purposes for preparing this book were to facilitate the work of scholars by providing a framework for viewing a rather large amount of data and to influence those who make policy affecting the Department of Defense and its organization.

Several questions come to mind in reading *Reappraising Defense Organization* and evaluating its contents. Does Dr. Barrett really reappraise defense organization, as the title would suggest, or does he just ingeminate old and worn-out ideas? Did the author really put the reappraisal of defense organization into better perspective or focus? Why does the author limit himself to very modest proposals?

The book's first seven chapters summarize the various staff studies and replies (all of which have been fully coordinated) that military readers have been totally saturated with throughout their careers. At the end, Dr. Barrett leaves us flat with some mediocre recommendations for a minor reorganization of DOD, applying the famous Band-Aid solutions to major problems.

Some key points are made early in the book:

(a) The Defense Organization Study of 1977-80 (DOS 77-80) suggests the Joint Chiefs of Staff (JCS) and the

military department secretaries are weak, ineffectual, and sterile institutions dominated by the Army, Navy, Air Force and Marine Corps. Significant Department of Defense decisions . . . derive from the interplay between the Secretary of Defense . . . and each of the services, whose unflagging, skillful, and effective pursuit of their interests is deservedly legendary.

(b) During the two decades since the last major reorganization in 1958, DOD organizational efforts followed directions other than structural. They focused on consolidating the performance of common functions in defense agencies and building and adjusting processes to regulate major activities That activity continues apace.

(c) The commanders in chief of the unified and specified commands (CINCs) have neither the influence nor the clear-cut durable links with higher authority commensurate with their responsibilities as supreme military commanders of US forces in the field directly under the highest civilian authorities.

(d) The service secretaries are not participants in top management of the Department of Defense and are not in a position to act as the actual leaders of their departments.

Dr. Barrett goes on to state that the studies are not timid in defining the appropriate relationships between central management and the rest of the Department of Defense. Many examples are described in the analysis of organizational relationships within the Department of Defense that the studies have identified as falling short of the mark in accomplishing the various missions assigned to the department. However, that is where the story told in this book really ends.

The book, basically, is a study of studies, and although the author tells us that the studies were not timid in identifying and describing problem areas, it is the opinion of this reviewer, that the studies do in fact, encourage timidity. The studies are continuously addressing the same old issues and problems of other studies, which point out the glaring fact that nothing effective has been done for years. This study marches to the familiar bureaucratic drumbeat of "reinventing the wheel" within the same structure and using the same positions and personnel, labeling it a "reorganization." It may look different on paper, but do not be fooled: it is the same organization that it was before being "reorganized." Thus, Dr. Barrett has managed to go down the familiar path himself. The reader is lost in a maze of bureaucratic terminology and acronyms embedded in study after study and staff replies to those studies.

We need fewer of these studies that provide us new form without change of substance or function. Instead, we need bold and imaginative initiatives to provide the best possible means of protecting this nation's freedom. The first of these initiatives would entail reorientation toward the wartime/operational missions as the true purpose of the Defense Department. True, we believe in deterrence, but a combat-ready DOD would add a great amount of credibility to that theory. The second initiative would reinstitute the leadership mode or approach, scrapping the management approach. *Reappraising Defense Organization*, like

so many other studies, continually barrages us with the words *management, management approach, reorganize, staff, adequate staff, etc.*, failing to recognize that we have had too much management and not enough leadership. Perhaps by placing less emphasis on management-oriented, staff-heavy vehicles and greater emphasis on leading people (and not shuffling them around in reorganizations), we will breathe life into the current system and allow it to function. A third initiative I would recommend is to realign the command structure so that forces assigned to CINCs would train and operate with them in peacetime, making them more cohesive and effective in the event deterrence fails. A fourth initiative would be to relegate the services to a role whereby they provide manpower and skill training but then make that manpower available to the appropriate CINC's forces. Finally, it is high time that the direction for the DOD be provided in coherently negotiated policy resulting from the proper constitutional relationships of the Executive Branch and the Congress of the United States.

Dr. Joseph Pearlman
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Mission to Mars: Plans and Concepts for the First Manned Landing by James E. Oberg. Harrisburg, Pennsylvania: Stackpole Books, 1982, 221 pages, \$14.95.

Two American presidents left an indelible imprint on astronautics: Dwight D. Eisenhower and John F. Kennedy. Eisenhower in 1958 divided U.S. astronautical activity between civilian scientific exploration and uses of space, assigned to the National Aeronautics and Space Administration (NASA), and military applications, reserved for the Department of Defense. Kennedy in 1961 launched a program to land a man on the moon and return him to earth before the end of the decade. But while Eisenhower made certain that a civilian agency would be responsible—at least initially—for the bulk of the nation's astronautical activity, Kennedy's Apollo lunar landing program fractured NASA, dividing the civilian organization between an office of space sciences and applications on the one hand and manned spaceflight on the other. Public attention and the enormous emphasis that attended Apollo helped ensure that the proponents of manned spaceflight would control and shape the course of NASA and its programs in the years that followed. In the view of most space scientists, by the late 1970s Congress and the space agency had at least temporarily abandoned the scientific exploration and use of space with automatic vehicles in favor of an immense investment in manned systems. In American spacefaring, manned spaceflight, the Skylab, Apollo-Soyuz, Space Shuttle, and plans for a manned space station clearly prevailed.

For those interested in the promotion of manned spaceflight in general and a flight to Mars in particular, James E. Oberg's *Mission to Mars* is a book for your "must-read" list. Oberg is reported to be (in the words of the dust jacket) "a mission flight controller for the McDonnell-Douglas Aerospace Corporation" at NASA's Johnson (manned flight) Space Center. In this book, he has assembled and

attempted to interpret the works of others, most notably individuals who presented papers at a 1981 Case For Man on Mars colloquium in Boulder, Colorado. His thesis is as unmistakable as it is uninformed: A manned flight to Mars must be an American achievement, and soon, before the Soviets realize this plum. But, you ask, what is man to do there? "The outbound leg of the trip, far from being boring and uneventful, will be crammed full of training tasks and other educational activities, along with housekeeping, exercise, and some uniquely valuable scientific work." (p. 15) Once landed on the martian surface, man's activities "may center around transportation capabilities, which can be made surprisingly potent." If you have not recently encountered a surprisingly potent transportation capability, hang on, it is just over the next planet. After this Introduction, the narrative deteriorates rapidly.

The real interest of *Mission to Mars* lies in its strident, mindless advocacy: it is representative of a genre. There may be a good reason for man someday journeying to Mars, but you will not find it here. Indeed, I suspect that men will visit and perhaps establish a permanent base on Mars before the end of the twenty-first century. But the author—whose credentials as a "man-to-Mars proponent" and "would-be public opinion manipulator" (p. 176) appear unimpeachable—laments that well-placed critics have caused the enterprise among the American public to suffer "a hopefully temporary eclipse." (p. 172) If this curious volume is widely read, it just may propel man on Mars into a permanent eclipse.

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Israeli Nuclear Deterrence: A Strategy for the 1980s by Shai Feldman. New York: Columbia University Press, 1983, 310 pages, \$25.00.

The only full-length monograph that deals, to my knowledge, with the delicate question of Israeli nuclear potential is Professor Shai Feldman's book *Israeli Nuclear Deterrence*; and it is a *force de frappe*. Its virtues are clarity, orderliness of argument, the manner in which the author avoids cheap moralism while remaining thoroughly engaged in, yet detached from his subject, the way he exposes myths but does not replace them with others equally egregious, and finally, his ability to keep firmly before the eyes of his readers, without recourse to scenarios of lurid specificity, that frightening aspect of life in a nuclear age which the poet Saint-John Perse once described as a great principle of violence that holds sway over our habits and customs.

Still, acknowledging the fears inherent in a nuclear era does not prevent Feldman from taking an optimistic position. He argues that the government of Israel might be well advised, under carefully defined circumstances, to declare a nuclear deterrence policy. Such a policy, he believes, would lead, in turn, not only to a controllable balance of terror in the region for which the rules of the game are clearly enunciated but also to the establishment of a geostrategic regional stalemate that would permit Israel to withdraw

safely from all occupied territories under the umbrella of nuclear security. And these outcomes could not help but encourage the regional antagonists to reconceptualize their bilateral relations and to move off the dead-center of a zero-sum game mentality whereby one side demands absolute security at the expense of the other side's absolute insecurity. It is this kind of no-alternative politics which, in the past, has provided fertile ground for the ambiguity that characterizes the present nuclear situation in the Middle East.

Feldman's conclusions are reasoned carefully and authoritatively. He surveys the entire range of bibliographical literature available today and does a first-class job of synthesizing his materials into a cogent view of Israeli nuclearization, the prospects for peace and the risks of regional nuclear war, and the possible responses from the superpowers to a nuclear-armed Israel. The main defect of *Israeli Nuclear Deterrence* is perhaps that it is far too reasonable in analyzing a subject about which there is still a paucity of hard incontrovertible data.

The prospective reader should not be deterred by this caveat, however. Feldman's book is the best book currently available on this elusive subject and deserves careful scrutiny.

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The Conspiracy and Death of Lin Biao by Yao Ming-le.
New York: Alfred A. Knopf, 1983, 231 pages, \$13.95.

This account of the death of Lin Biao is an absorbing, if unedifying, page-turner. It presents the details of not only the unsuccessful conspiracy of Lin Biao, Defense Minister of the People's Republic of China, against Mao Zedong but also Mao's successful counterconspiracy against Lin. The book's value turns upon the authenticity of its documentation and the reliability of cited sources, which are impossible to verify. Yet, the story appears to be credible and is persuasively written.

The official version of the death of Lin Biao is well known. He is said to have died in a plane crash in the Mongolian People's Republic while attempting to escape to the Soviet Union after his plot to assassinate Mao had been exposed. Yao Ming-le follows an enthusiastic introduction by Stanley Karnow with a vivid, climatic account of the situation leading to the true event. Lin, Mao's designated heir, did not die in Mongolia. He was, in fact, blown up by rockets while riding in a Red Flag car. This vehicle was carrying him away from a dinner party that Mao had hosted and at which Lin had been treated as an honored guest. Mao had learned of Lin's conspiracy and had planned both the dinner party and the assassination. Zhou Enlai is said to have referred later to this intimate but elaborate party as "the last supper." (p. 159)

Yao goes into great detail regarding the nature and extent of both Lin's conspiracy and Mao's counterconspiracy. Lin had used the Great Proletarian Cultural Revolution (GPCR) of 1966 to expand his military base. Catering to Mao's growing megalomania, he had also promulgated

the famous little "Red Book," which made "The Thought of Mao Zedong" the font of omniscience in all areas of knowledge and endeavor. On the surface, Lin appeared to be a blind follower of Mao. For his part, Mao was grateful to Lin for having restored some semblance of order after the havoc of the GPCR. It should be recalled that Mao's first heir, his former comrade, Liu Shaoqi, had become the target of the Cultural Revolution. But after replacing Liu with Lin, Mao began to have second thoughts about the wisdom of this decision. Presumably, he took Lin's statements about eternal loyalty with a grain of salt.

This fascinating book, with its dramatic descriptions of palace intrigue, power struggles, extravagant duplicity and corruption, confirms the theory that Lin attempted a coup against Mao. In the process of destroying the official Maoist story of how Lin died, it also destroys many other appearances that have been of importance and value to the Chinese communist leadership. In particular, it presents an extraordinary picture of gilded youth: the children of the top leadership. It is unmatched in its scathing detail about Lin Ligu, the son of Lin Biao. Nothing could be more totally opposed to the self-portrayed image, replete with simple proletarian virtues, of the Chinese communist leadership. This contemporary account resembles the histories of Chinese dynasties which, when painting a picture of decline, are full of deception and neurotic profligacy. This time, however, the story is refracted through a legalist-Machiavellian vision rather than through that of Confucian moralism.

What is to be derived from such a tale? That disunity between the party and the military can make trouble? That technology has changed, but the nature of intrigue has not? The story discredits Mao as much as it does Lin. Now that the era of frenzied glorification of Mao is over, dissemination of this kind of material appears to be part of the backlash. Clearly, such attempts as there were to provide for orderly succession in China went awry because of the lack of an institutional basis, coupled with too much dependency on personal whim.

Aside from the intrigue and intricacy of Chinese politics at the top (*plus ça change, plus c'est la même chose*), the book includes much interesting material about Chinese military organization and communication. Its special emphasis is on the air force, the intended power base of Lin Ligu. Two points are significant here: first, a complete degenerate like Lin Ligu was taken seriously, and second, a significant segment of the Chinese military establishment almost subverted the state.

Readers who are not much interested in the details of recent Chinese politics might enjoy this book as a form of action-adventure, but they will search in vain for heroes or heroines to admire.

Dr. Rhoda Weidenbaum
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China as a Maritime Power by Lieutenant Commander David G. Muller, Jr., USN. Boulder, Colorado: Westview, 1983, 268 pages, \$30.00.

Commander David Muller has produced the most valua-

ble work on China's maritime evolution since Bruce Swanson's *Eighth Voyage of the Dragon* was published by the Naval Institute Press in 1982. In contrast to Swanson's work, which presented a superb history of China's search for seapower, Muller concentrates on the period since 1945. Thus, although Muller's book can stand alone, collectively the two volumes provide an essential history of the twists and turns in the historical and contemporary development of China's maritime power and naval strategy.

Muller's focus is on more than simply naval power and strategy, as the title *China as a Maritime Power* indicates, for he concentrates on the much broader concept of "maritime power." Navies, he argues, are instruments of national policy, but they are instruments "whose development and use are motivated by strategic, economic, and diplomatic interests as well as by domestic politics." (p. 3) Herein lies the critical value of his work, for Muller returns repeatedly to these themes as he traces the changing attitudes and policies of the Chinese leadership toward the maritime dimensions of its national objectives. Thus, although the volume is structured chronologically into three parts (1945-60, 1960-71, and 1971-83), each of the three parts is organized into chapters analyzing naval history, naval strategy, naval politics, maritime economics, and maritime foreign relations. The result is an absorbing analysis not only of the growth of Chinese maritime power but also of the conflicts that emerged among factions within China's political elite as these factions fought over resource allocations, defense doctrine, and strategy and established priorities for the national objectives of the People's Republic of China (PRC).

As an intelligence officer, Commander Muller was able to arrange the declassification of numerous intelligence reports prepared between 1945 and the late 1960s. Because of this, the first ten chapters of the book contain information not previously available to scholars. This is not to say that Muller is overly reliant on these sources, for his research is broadly based on the available materials, but to suggest that those with a special interest in the PRC should pay close attention to Muller's analysis of those years. His detailed analysis of Sino-Soviet relations in the development of the Chinese navy and the final schism of 1960 will be of particular importance to students of Soviet and Chinese affairs.

Muller contends that by the 1980s, the image of China as a continental power concerned primarily with internal issues and the defense of its land mass is no longer entirely accurate. The Chinese have recognized that their future economic development is dependent on increased foreign trade and foreign technology, while future energy requirements have forced Beijing to look more toward offshore oil resources. The expansion of China's maritime interests is reflected both in the growth of its merchant fleet and the construction of at-sea replenishment vessels that permit the navy to extend its operating areas. The naval component of China's defense strategies took on greater significance as Beijing's sea-based nuclear deterrent came closer to deployment with the flight test of a solid-fueled missile from a converted Golf-class submarine and the sea trials of China's first SSBN. Assuming the continuation of current trends, Muller foresees the 1990s as years when

China will become a major maritime power, with its navy an important factor in the Asia-Pacific region.

Well written, well organized, and sharply analytical, Muller's efforts have provided both the military professional and the civilian specialist with the definitive work on China's contemporary maritime and naval development.

Dr. Paul H. B. Godwin

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Hitler's Luftwaffe in the Spanish Civil War by Raymond L. Proctor. Westport, Connecticut: Greenwood, 1983, \$29.95.

Against the advice of nearly all of his ministers, Hitler ordered the German military into the Spanish Civil War in July 1936. The Luftwaffe was the first to respond, sending transports and then fighters. For the next three years, the Luftwaffe trained, fought, and tested their equipment, men, and organization. It encountered a host of problems: unruly allies, forbidding climate, administrative foul-ups, a determined enemy, aged or untested equipment, and that supreme test—Spanish roads. The Luftwaffe lost almost as many aircraft to accidents as it did to combat and almost as many men to auto accidents as were killed in action. Confronted at times with as many as 100 different types of vehicles and 20 or more different types of aircraft, the men of the Condor Legion performed miracles. They were a crack outfit. Never larger than 5000 men and 100 aircraft, the legion played a vital role in the victory of General Franco.

Professor Raymond Proctor, a former professional officer, has written a straightforward, terse account of the operations of the Luftwaffe in Spain. Drawing from Spanish and German archives augmented by personal interviews and diaries, the author describes German aerial involvement in Spain from its beginning to the end. His narrative includes the type of equipment used, crew members killed, and results achieved. However, because most of his information comes from the action reports filed by the legion, *Hitler's Luftwaffe in the Spanish Civil War* is strictly limited to the operations as seen by the men in Spain. Although the author hints at what effect events had on Berlin and on the Luftwaffe in general, he is very cautious in drawing further conclusions from his material.

Spain was important for the Luftwaffe. Here the Germans learned the value of the finger-four formation for fighters, the importance of visual identification in close support work, the need for flexible organizations, and the usefulness of flak units in ground actions. The most significant lesson pertained to the methods of employing tactical air power, a lesson which the Luftwaffe never forgot. The pronounced tendencies of World War II—the emphasis on combat arms versus support arms, the downplaying of trainers and recon aircraft, the ignoring of the technical side of the Luftwaffe in favor of the combat side—all were anticipated in Spain. In hindsight, it is easy to see what the Germans learned from Spain and also what they missed.

Professional officers will enjoy this book. The cool, detached account of the operations, the interesting comments

about the equipment, the comparisons with the Russians and the Italians, and the usual tales of administrative mistakes make for good reading. Hitler was fighting a limited war in Spain, but his troops could not. Little of the savagery and none of the politics of the war are spelled out, but the feel for war is there.

One major theme in *Hitler's Luftwaffe in the Spanish Civil War* dominates and is worth noting: warfighting in a country like Spain may be a good testing ground, but it is wise to know what you are testing for and what it all will mean later for your organization.

Dr. Edward L. Homze
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Foulois and the U.S. Army Air Corps, 1931-1935 by John F. Shiner. Washington: Government Printing Office, 1983, 346 pages, \$13.00.

Published as part of a General Histories series by the Office of Air Force History, *Foulois and the U.S. Army Air Corps, 1931-1935* is a slightly revised version of John F. Shiner's doctoral dissertation (Ohio State University, 1975). It argues that the early 1930s was a formative period in the development of American military aviation.

When Major General Benjamin D. Foulois became chief of the Air Corps in 1931, the General Staff considered aviation as useful in support of ground operations but without any broader function. Equipped largely with wood-and-wire biplanes that had changed little since World War I, tactical air units were parceled out to corps area commanders. But dramatic changes took place over the next four years. While retaining other missions (ground support and coastal defense), the Air Corps became committed to an offense doctrine that emphasized strategic bombardment as the key to victory. Striking elements were concentrated under a single commander in a General Headquarters Air Force, and the first B-17s had come into service.

Shiner credits Foulois with playing an "instrumental part" in leading the Air Corps through this time of transition. The first pilot to hold the senior position in the Air Corps, Foulois worked tirelessly in behalf of a strong, independent air force, frequently facing formidable obstacles. As Shiner points out, the General Staff may not have been composed entirely of reactionaries, but most senior officers (General Douglas MacArthur was an exception) lacked an appreciation of air power. The nation was in the midst of the Great Depression, and the Air Corps lacked adequate funds for manpower and aircraft procurement. Under these adverse circumstances, the accomplishments of Foulois appear especially impressive.

Unfortunately, Foulois left office under a cloud. He embarrassed President Roosevelt when the Air Corps attempted to fly the mail in 1934—a public relations and operational disaster. Also, a congressional subcommittee, led by Representative William Rogers, accused Foulois of violating the law by favoring negotiated contracts over competitive bidding in aircraft procurement. An inquiry by the Inspector General cleared him of criminal charges (pur-

chase by negotiation was common practice) but indicated that Foulois had made misleading statements to the subcommittee. Rogers harassed Foulois into retirement in 1935. Author Shiner rightfully concludes that the subcommittee's actions were "entirely unfair" to the Air Corps chief; Foulois deserved better from the country he had served so faithfully.

Shiner relied on rich primary sources to compile this detailed analysis of a pivotal time in the evolution of the air force. Although one might wish that he had taken the opportunity to broaden the focus of an excellent dissertation, it is a pleasure to have his valuable study in a more accessible form.

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Three Napoleonic Battles by Harold T. Parker. Durham, North Carolina: Duke University Press, 1983, 235 pages, \$12.75.

For some time it has been the custom to dismiss much military history of the traditional sort as "drum and trumpet" writing. This viewpoint has much to commend it, but it has led to the less commendable habit of disparaging all operational history. In fact, the problem with much of the old type of military history was not that it preferred telling about battles to studying social forces and institutions but simply that so much of it was shallow, chauvinistic, and false. John Keegan in *The Face of Battle* has alluded to the frustration of trying to learn from a traditional battle piece what really happened.

In recent years, many writers have begun to correct this situation. As long ago as 1944, Duke University Press published *Three Napoleonic Battles*, by Harold T. Parker, a Duke faculty member. Due to wartime conditions, the book had a limited press run and was relatively little known. Now Duke Press has reissued it with a new afterword by the author and a foreword by Steven Ross of the Naval War College. Parker explains that in writing the book he intended to research and write in accordance with rigorous standards. Two of the battles he chose—Friedland (1807) and Aspern-Essling (1809)—are among the less commonly studied of Napoleon's battles, while Waterloo, Parker's third selection, is much better known, allowing him to make a contribution to ongoing debate.

The result is impressive. The research is extensive and detailed, relying on a wide variety of eyewitness accounts. The writing is clear, eschewing colorfully vague language but remaining lively and readable. Rather than cluttering the page, the footnotes engage the reader in understanding what we actually know about the battles. With Parker, we address such questions as what the Russian commander at Friedland thought he was doing when he blundered into a losing fight and just when Napoleon knew he was going to lose at Aspern-Essling. Drawing on medical accounts, Parker also provides a grim description of the sufferings of the wounded.

While Parker's approach remains fresh, readers of history will recognize that Parker is still writing military

history from the top down, focusing on the commanders and using other details as illustration. It was John Keegan who made the most striking departure in relating operational history—looking upward from the bottom by revealing the experiences of ordinary people in battle. Still, it would be a loss if, in applying Keegan's formula widely, we should come to think of a work like Parker's as "dated." *Three Napoleonic Battles* is a solid study and is recommended for any reader interested in Napoleonic warfare or in how military history should be written.

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The Galleys at Lepanto by Jack Beeching. New York: Charles Scribner's Sons, 1983, 267 pages, \$17.95.

On 7 October 1571 a Christian galley fleet, formed from a distrustful alliance of Venetian and Spanish forces, met a Muslim galley fleet under Ottoman leadership near the western end of the Gulf of Patras in central Greece. The ensuing battle, named by the victorious Christians for the nearby town of Lepanto, marked both the high tide of the Ottoman Empire's expansion in the Mediterranean and the last and largest galley fight ever fought. The Lepanto campaign and battle have considerable historical interest for technical, military, and naval reasons, since they came at the end of a period of technological change and transition, after the general adoption of gunpowder weapons and just before the dawn of the age of the broadside sailing warship.

Lepanto has received little recent scholarly attention. For every word currently in print on Lepanto, there are at least ten available on its rough northern equivalent, the Spanish Armada campaign of 1588. A full book-length analysis of Lepanto should thus be welcomed by students of the art of war. Unfortunately, however, *The Galleys at Lepanto* suffers from defects as basic as to render it of dubious value.

First, the account lacks source citations of any kind. This oversight, in and of itself, need not be a fatal flaw. However, it is apparent, both from textual analysis and from examination of the bibliography, that the narrative is based almost entirely on badly outdated secondary sources. Unsurprisingly then, the greatest (and most irritating) weakness of the text is a pervasive western European ethnocentrism characteristic of the late Victorian sources on which John Beeching is so dependent. There is no even-handed assessment of Muslim and Christian objectives and motivations; no systematic analysis of the logistic, tactical, and technical factors on which the campaign and battle turned; and surprisingly little information about how oared war galleys and fleets of galleys were manned, provisioned, and operated. The narrative is, as the dust jacket asserts, well crafted, containing much entertaining detail. But a specialist's knowledge is needed to distinguish between hyperbole and reality in the text. Those with the knowledge to make the distinction will find little that is new here; those lacking it should look elsewhere for an accurate overview of the Lepanto campaign, perhaps consulting the

appropriate sections of *The Venetians* by Colin Thubron and the editors of Time-Life Books.

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The Chosen Instrument, Juan Trippe—Pan Am: The Rise and Fall of an American Entrepreneur by Marilyn Bender and Selig Altshul. New York: Simon and Schuster, 1982, 605 pages, \$19.95.

As a veteran commercial airlines traveler, I looked forward to reading and reviewing the biography of Juan Trippe (1899-1981), the founder and president of Pan American Airways. However, by the time I finished reading *The Chosen Instrument, Juan Trippe—Pan Am*, I felt as much of a letdown as someone stuck in the O'Hare Airport holding pattern!

Marilyn Bender and Selig Altshul present an interesting and informative biography of Juan Trippe, as well as an in-depth look at the creation and development of Pan-Am—as it became known. They do well in their examination of the U.S. Army Air Corps and its mail service, explaining their impact on Juan Trippe and Pan Am in the 1920s and 1930s. The authors write about the contributions made to aviation history by such people as Charles Lindbergh, Henry "Hap" Arnold, Carl Spaatz, and Eddie Rickenbacker. According to the authors, it was Charles Lindbergh who did much to influence Trippe's decision to embark on the building of an international airline.

A number of interesting and not widely known facts are brought out by the writers. For example, that Pan American Airways was one of the pioneers in establishing a worldwide communications system—a system that would be later used and expanded by the Army Air Corps during World War II; that Pan Am was also instrumental in the development of overwater navigational aids for aircraft; and that in the 1930s, Pan Am planned and developed many of the long overseas air routes that are used today by airlines throughout the world.

Nevertheless, the authors fall short in their treatment of American history, for their book contains numerous historical inaccuracies. For example, they refer to John W. Davis as a vice-presidential candidate, when, in actuality, he was a presidential candidate in 1924. They do vindicate themselves to some extent by bringing out that Franklin D. Roosevelt was instrumental in pushing the idea of an American flag carrier (which eventually turned out to be Pan Am), and for their sections on World War II and on the establishment of the Army's Air Transport Command, which provided impetus for the expansion of both domestic and international air travel after the war. The need for such expansion, coupled with Trippe's abilities, made Pan Am the leading American airline in the post-World War II era. However, the authors are generous in lavishing accolades on other pioneers of the American airline industry—Eddie Rickenbacker of Eastern Airlines, C. R. Smith of American Airlines, William Patterson of United Airlines, and the ever enigmatic Howard Hughes of Trans World Airlines—all of whom were contemporaries of Juan Trippe.

The last unit of the book examines the post-World War II period into the 1970s. It is here that one gets an in-depth look at Trippe and his accomplishments. It was he who brought the American airline industry into the jet age in the late 1950s, with the acquisition and use of the Boeing 707. Trippe and Pan Am were also responsible for the later introduction of the 747 jumbo jet to the airline industry—an action that led to the later economic misfortunes of America's airlines, the authors believe. The book closes with Trippe's retirement, Pan Am's financial troubles in the 1970s, and Trippe's death in 1981.

For the expanse of time covered and the number of pages written, the book has too few photographs. It also contains excessive trivia, particularly concerning the Juan Trippe's lineage, his Yale background, and his Yale friends in high places. Although a biography, it reads too much like a novel and is encumbered by too many anecdotal passages that detract from its continuity and objectivity. *Chosen Instrument* is informative and interesting, but I would recommend it only for those who have a very long wait at an airport or are contemplating buying stock in Pan Am.

Dr. Herbert P. LePore
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Families under the Flag: A Review of Military Family Literature by Edna J. Hunter. New York: Praeger, 1982, 336 pages, \$34.95.

Families under the Flag, by Edna J. Hunter, underscores the remarkable resiliency of military families and their important contribution to the accomplishment of the military mission. Geared to military planners and service providers, the book combines an extensive review of the literature on military families with an annotated bibliography on military family literature. Focusing on the unique aspects and stresses of military family life and organizational responses to family concerns, the author emphasizes both the need for continuing research to assess the changing needs of military families and the importance of developing military policies and programs that respond to those needs, while supporting military mission requirements.

Families under the Flag is organized into three sections, the first of which provides a review of literature on military families. Here, Hunter addresses the changing composition of the military community from a bastion of single men to an institution with many families attached to it. She finds that no longer do many of these families fit into the traditional military family mold of husband, dependent homemaker wife, and children. Contemporary trends in marriage, divorce, single parenthood, dual-career patterns, and voluntary childlessness are all reflected in military families today. Hunter also reviews literature which suggests that these families are influenced by many of the same strains as other American families: inadequate family finances, contrasting values, changing definitions of husband and wife roles, and lack of viable family support systems. But military families are found to have additional stress created by the military lifestyle: periodic cycles of separation and reunion, frequent mobility, hazardous duty

assignment, long-term separations from extended family and friends, and subservience of family needs to military objectives and requirements.

On the other hand, Hunter also finds the military lifestyle to have positive aspects for families, offering such benefits as stability of income, early retirement with pension, medical care, and social and recreational opportunities. In addition, she stresses ongoing military research on military families and the increasing provision of family support services. Hunter makes it clear that support for the military family is not simply humanitarian but based on the knowledge that what is good for the military family is good for military responsibilities as well. Unless the balance sheet shows a credit balance, the military family is likely to opt out.

The second section of the book provides specific references for section one by topic area (i.e., family and organization interface, family roles, wives adjustment, separation and reunion, mobility, children of military families, war-time stress, retention and retirement, and support services).

In the final section, Hunter presents an annotated bibliography of the literature on military families, alphabetically arranged by author, revealing the breadth, scope, and diversity of literature in this area. This bibliography should be a helpful reference source for both present and future researchers of the military family.

Families under the Flag is an important contribution to the literature on marriage and family life. It provides both a better understanding of the military experience for families and an empirical foundation for continued research and study of military family life. By focusing on the unusual stresses on military families and describing how these families cope, it also provides new insights into means to strengthen civilian families. Military planners, other family life professionals, and service providers should find this book a very helpful aid.

Dr. Gary Lee Bowen
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The Aircraft Treasures of Silver Hill by Walter J. Boyne. New York: Rawson Associates, 1982, 247 pages, \$22.95.

All who share in the love of aviation history should visit the National Air and Space Museum and its Paul E. Garber Preservation, Restoration, and Storage Facility (popularly known as Silver Hill) in Suitland, Maryland. For those not privileged to tour Silver Hill's treasure house of historic aircraft, Walter Boyne's *The Aircraft Treasures of Silver Hill* is a must.

Even those who have visited Silver Hill will find the book a rich and rewarding experience. A collector's prize in its own right and well worth the price of admission, Boyne's exceptional work opens the doors to a fascinating tour through Silver Hill's classic hardware, including the "oddballs and brave experiments," the "bombers," the "beautiful biplanes," the "villains of World War II," and the "ghosts" that have yet to be restored or even discovered. Boyne is an expert guide, and his colorful sketches are almost as captivating as the real experience of roaming rapt among the restored relics of yesterday's skies.

Much more than a coffee-table for air-minded guests, this fine book provides an enchanting history (warts and all) of the National Museum's fabulous aircraft restoration facility and some not-so-fabulous bureaucrats who too often stood as obstacles to the facility's founder, Paul E. Garber, and the tireless aviation enthusiasts and employees who dedicated their lives and careers to making Silver Hill a reality and a source of national pride. Boyne takes his readers from Paul Garber's start (obtaining Lindbergh's *Spirit*), through the rundown days when the restoration effort was the "Shame of Silver Hill," to its contemporary position as the muscle for the National Air and Space Museum in downtown Washington. He also explains the "nitty-gritty" in keeping up Silver Hill.

At the time Boyne wrote this book, he was Deputy Director of the National Air and Space Museum. He is also a retired USAF colonel and command pilot who knows and cares deeply for his subject. More important to those who read his book, Boyne is a fine writer who passes his knowledge and appreciation of aviation to his reader in a way that is unforgettable. Read the book. You will like it.

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Yesterday's Wings by Joseph E. Brown, with photographs by Dan Guravich. Garden City, New York: Doubleday, 1982, 201 pages, \$29.95.

This engaging book celebrates both the accomplishments of that remarkable organization, the Confederate Air Force (CAF), and the various World War II airplanes which the CAF has painstakingly collected and restored to operational condition at its Rebel Field base in Harlingen, Texas. There are numerous places where devotees of military aviation can see and study aging warplanes whose wings will never soar again. The CAF collection is unique because the organization has succeeded, against formidable odds, in keeping a substantial number of historically important aircraft actually flying, thereby creating a living museum of the air.

Joseph E. Brown, an active "colonel" in the Confederate Air Force, briefly recounts how the organization got its start in the early 1950s when crop duster Lloyd Nolen of Texas and a group of associates set out to acquire a P-51 Mustang. Gradually, the organization increased its fleet to today's array of American and foreign combat planes. Particularly interesting in this regard is Chapter 10, "The Saga of Fifi." Here Brown relates how the Confederate Air Force, with great difficulty, secured a Boeing B-29 Superfortress and obtained reluctant permission from the Air Force and the Federal Aviation Administration to fly it in aerial exhibitions.

Most of *Yesterday's Wings*, however, consists of short histories of the planes that make up the CAF's remarkable collection. Included are such famed warbirds as the Lockheed P-38, the Bell P-39, the Curtiss P-40, the Republic P-47, the Boeing B-17, the Supermarine Spitfire, the Messerschmitt Me 109, the Japanese Zero, and others. Although these narratives are well written, specialists in the history of

military aviation will probably learn little that is new to them and may wish, as I did, that the author told more about the persons, strategies, and activities responsible for the outstanding feat of historical preservation that the CAF has accomplished.

The volume includes an excellent collection of some 170 photographs, including a number of the "before and after" variety. These photographs reveal how the rusted remnants of once-proud warplanes were lovingly transformed into flying members of the CAF fleet so that they can be seen once again where they belong—in the sky where they and the pilots who flew them served with such distinction.

Dr. W. David Lewis
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Somme by Lyn Macdonald. London: Michael Joseph, 1983, 366 pages, \$24.95.

Frozen in time in the history of Great Britain, her Empire, and her Commonwealth is 1 July 1916. At 7:30 on that bright, hot summer morning, some 150,000 British and Imperial troops rose from their trenches and attacked the German positions in the Somme region of northern France; by evening of that same day, the British army had sustained almost 60,000 casualties, including almost 20,000 dead. The magnitude of the disaster was not immediately apparent, even inside the British army itself, since battlefield communications were hopelessly primitive, unlike developments toward immense firepower that the armies of 1914-18 had achieved. The battle was to grind on for several more bloody months and has come to symbolize all the heroism, stupidity, desperation, and romanticism of a war almost forgotten, especially in this country.

Lyn Macdonald's superb new book, *Somme*, has brilliantly recreated the essence of this terrible struggle. Avoiding the polemics that so often serve as the real focus of so many accounts of the battle, Macdonald instead concentrates on the experience of battle itself. Macdonald allows the survivors (and in ten years' research on various aspects of the Great War, she has interviewed some 3000 of them) to tell their stories, skillfully weaving their accounts into her narrative. The result is a richly textured tapestry in which the sights, the sounds, and the very feel of this war are graphically conveyed to the reader.

It would be wrong, however, to leave the impression that this beautifully illustrated, meticulously researched volume is fare only for Great War "buffs." There is much here for the military professional to ponder. It is, or should be, a sobering experience to learn, especially in light of the horrendous casualty lists, that "if a battle could have been won by planning, then the result would have been a foregone conclusion, for never in the history of warfare had a campaign been more meticulously planned down to the last infinitesimal detail." (p. 19) Yet the slaughter on the Somme cannot be explained simply as a function of blind adherence to suicidal tactics. The "creeping barrage" was developed to protect attacking infantry, and the tank—still in its developmental stage, weighing twenty-eight tons and requiring one hour and one gallon of petrol to travel half a

mile (p. 265)—was rushed into battle before it was truly ready for combat.

Others, notably historian John Terraine, have pointed out that to defeat a great power on the battlefield, like Germany in 1914, required literally oceans of blood. Some of the same leaders who demanded war à outrance later professed the uttermost horror at the cost of such war aims. Lyn Macdonald's book forces us to look at the costs of such decisions, not in their abstract results, but in the shattered lives and dead bodies of thousands of men. By its very simplicity and quality of deliberate understatement, *Somme* conveys better than any other book I have read what the face of battle is really like—how mistakes, heroism, and just "plain bad luck" operate on the battlefield. Because, in many ways, the combat environment of the next war may prove very much like the slaughterhouse of 1914-18, we need to examine and reflect on that earlier experience. *Somme* provides a priceless key to unlock what the Great War was actually like. Certainly it is a book that any professional officer can read and contemplate with much profit.

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The Nazi Machtergreifung edited by Peter D. Strachura.
London: George Allen and Unwin, 1983, 208 pages,
\$19.50.

The Nazi Machtergreifung is a collection of essays by American, British, and Canadian historians. Essentially, the essays are bibliographic reviews of previous writings

and discussions of recent and continuing historical tendencies in research and interpretation. The editor, Peter D. Strachura, has contributed not only an excellent introductory essay, "Weimar, National Socialism, and Historians," but also two of the nine other essays, "The Nazis, the Bourgeoisie, and the Workers during the *Kampfzeit*" and "German Youth, the Youth Movement, and National Socialism." Professor Strachura is a competent scholar with editorial experience.

The Nazi Machtergreifung has the inherent problem of collected essays: some of them are simply better than others. Fortunately in this case, none is really bad, so the unevenness is not a major problem. Unity is achieved by developing the essays around a central theme, "the dynamics of social and political mobilization by the Nazi Party during the Weimar era," or whence came the pre-1933 support? The essays are concerned with the relationship between the Nazi Party and specific groups (women, youth, educated elite) and institutions (the church, the military), and the Party's successful mobilization of this support through ideology, propaganda, and foreign policy.

These collected essays provide an excellent introduction to the historiography and interpretations of the rise to power of the Nazis in the era of the Weimar Republic. They would be particularly valuable for those laymen or undergraduate students who have not yet read the voluminous literature now available on nazism. The footnotes provide further references (many of them, German-language sources), and the index, while primarily biographical, is adequate.

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The Air University Review Awards Committee has selected "Ultra: Some Thoughts on Its Impact on the Second World War," by Dr. Williamson Murray, as the outstanding article in the July-August 1984 issue of the Review.

R the contributors



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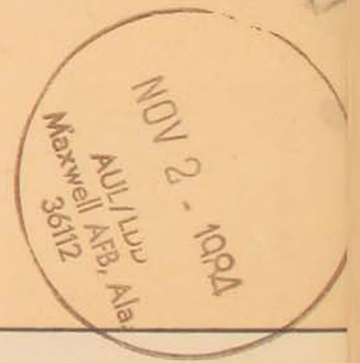
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