



AIR
UNIVERSITY
review

MARCH-APRIL 1980



Spain and NATO



the direct approach

Within the span of institutional memory, American military planning and operations have been marked by a doctrinal preference for mass. Given a choice, U.S. military planners have consistently opted for the strategic security provided by masses of men, money, munitions, and materiel rather than for the tactical opportunities and uncertainties of maneuver. Too much can be made of this predisposition; we have been ready, willing, and able to use the talents of a Sheridan, a Patton, or a Chennault. Similarly, Americans have fought effectively on a logistic shoestring when circumstances dictated: Merrill's Marauders and the American/Filipino guerrilla resistance to Japanese occupation forces in World War II are cases in point. But it can be argued with considerable force that such examples are exceptions to the rule, that historically we have tailored neither our doctrine nor our weaponry to maneuver warfare.

The mainstream of our doctrinal and operational traditions centers on the direct application of mass, underwritten by a powerful, mobilized economy.

Yet this tradition is at variance with the circumstances that face the Armed Forces of the United States today. Our most likely adversary for the foreseeable future, the Soviet Union, enjoys a significant numerical advantage in most areas of combat power. Should major war break out, we will probably not have sufficient time to mobilize our economy in advance of decisive military action. We must, in short, plan to fight outnumbered with our peacetime forces in-being, an orientation that stands in stark contrast to our pre-World War I, pre-World War II, and pre-Vietnam planning assumptions.

The underlying doctrinal concern, based on historical analysis, gives a sharp edge to the debate concerning the nature of the "force multipliers" which we clearly need. At the risk of doing violence to well-formulated and sophisticated arguments by oversimplification, we can identify two end points on the spectrum of solutions: On one end we find arguments of a purely doctrinal nature for the acceptance of the indirect strategic approach and of a tactical doctrine of maneuver as opposed to one of firepower and attrition. On the other end are arguments for superior weaponry whose considerable expense is frequently justified in terms of exchange ratios, a justification which, when reduced to numbers, can sound like an implied acceptance of attrition tactics.

Suspiciously unavoidable arise that firepower (read "expensive hardware") is being advocated as a substitute for intelligent tactics and that abstract and unproved theories are being advanced as substitutes (read "cost reductions") for badly needed weaponry.

Obviously, we have overstated the case. The most vocal proponents of maneuver doctrine and the indirect approach acknowledge the need for upgraded weaponry; the staunchest exponents of advanced weaponry see their products as superior tools for the strategist or tactician, not as his replacement. Both concede the importance of economic considerations.

The ultimate questions, on either end of the spectrum, are "How will it *really* work in combat, and how can we most effectively use it?" — questions which embrace the essence of the military profession. To develop coherent doctrine and strategy, now as in the past, we must understand the tactical characteristics of our forces. As we get closer to the essence of tactical reality — and it is our view that defense analysts of all persuasions are increasingly attempting to do just that — views should begin to converge.

Which leads to a concluding thought: Might it be that our historical preference for the direct approach emerged on a case-by-case basis as the product of rational military assessment, under political supervision, of the tools and time available? In each of the instances cited above, we did the best we could with what we had. Should today be any different?



articles

- 2 Spain and NATO: Problems and Prospects
Col. F. R. Stevens, Jr., USA
- 15 The Impossible Task — Defense
without Relevant Strategy
Lt. Col. Wolfgang W. E. Samuel, USAF
- 29 Some Thoughts on Air Force
Doctrine
Maj. Robert C. Ehrhart, USAF
- 39 British and German Air Doctrine
between the Wars
Dr. Williamson Murray
- 86 The Professional Revolutionary:
A Profile
Dr. Mostafa Rejai
-

departments

FIRE COUNTER FIRE

- 59 Tactical Air Power within NATO:
A Growing Convergence of Views
Maj. Donald J. Alberts, USAF
- 70 Two Responses
Maj. Price T. Bingham, USAF
Lt. Col. Owen H. Wormser, USAF

AIR FORCE REVIEW

- 74 From Theory to Action: Implementing
Job Enrichment in the Air Force
Lt. Col. Denis D. Umstot, USAF
Lt. Col. William E. Rosenbach, USAF

IN MY OPINION

- 82 Basing the A-10 in Europe —
Strategic and Mobility Problems
Col. Orin C. Patton, USAF
Maj. Kenneth W. Engle, USAF

BOOKS AND IDEAS

- 91 O Temporal O Mores!
97 Halder in Retrospect
Dr. James H. Toner
Capt. Daniel T. Kuehl, USAF

104 POTPOURRI

111 THE CONTRIBUTORS



SPAIN AND NATO

problems and prospects

COLONEL F. R. STEVENS, JR., USA

The Moors, on their arrival in Spain, thought the country to be an island, and named it the Hidden Land. The poet Auden described Spain as a land crudely soldered onto Europe. Yet, whatever elements of "separateness" may exist in Spanish society and temperament, for historical, cultural and political reasons, the country is so situated that the nation cannot escape its strategic importance to Western Europe and the world at large.¹

JOHN FULLERTON

THE question of Spain's entry into the North Atlantic Treaty Organization (NATO) alliance has been a subject of active controversy for over thirty years. So much verbiage has been expatiated on the subject throughout this period that by now it must surely have been addressed from every possible angle, and one more bottle of ink spilled would only add to what is already a decided surfeit. However, the issue is important and time-sensitive, and it deserves our continued attention and unremitting efforts to bring it to a speedy and enlightened resolution. As a minimum, recent changes in the military balance in Europe argue for at least one more effort, however futile, to bring the question into clearer focus.

NATO's Perspective

The forces aligned against incorporating Spain into the NATO alliance quite clearly lie within Spain herself and within the NATO membership. Viewing the issue first from NATO's perspective, there are a number of factors that balk achievement of the consensus required for Spain's admittance. Nonetheless, there appears to be a majority opinion not only that many compelling factors support this course of action but that the advantages, in fact, far outweigh the disadvantages. We will begin by addressing these positive factors.

benefits to NATO

The first and most obvious factor that makes Spain's acceptance advantageous to the alliance is the considerable military contribution she could make. So much has been written on this subject since 1949 that it does not need to be dwelt on at length. However, a complete picture of the key factors involved demands a brief review of this one aspect, which many feel to be the compelling argument overshadowing all others.

First, in terms of numbers, compared to the twelve current NATO members that contribute forces to the alliance,* Spain would rank sixth in gross national product (GNP) (\$123.6 billion), defense expenditures (\$2.36 billion), and tanks (860) and fifth in numbers of troops (315,500) and combat aircraft (214).² While these combat assets, if added to NATO, would not significantly tip the balance, they would represent a short-term enhancement at a time when the increasing disparity in combat power has become a matter of grave concern in Brussels. More important, the long-term potential promises even greater returns. Spain's universal military training program could field a total available force of one and

a half million men,³ and the Spanish soldier who would man that force has proved throughout history to be a tough and courageous fighter.⁴ While the recession bred of the 1973 oil crisis hit Spain harder than it did most of the other Western nations, her economy remains strong, with promise of even greater improvement with her pending assimilation into the European Economic Community (EEC).⁵ Spain, therefore, has the capacity to improve both the quality and quantity of the fighting equipment that would support this force.

However, Spain's potential contribution to the military balance far transcends mere numbers of men, tanks, and airplanes. It is her strategic location that offers the greatest advantage to any potential ally. So strong, in fact, is her geographic position that Spain has come to be commonly referred to as a "European redoubt," a relatively invulnerable sanctuary, wherein forces for use on the Central Front could be marshaled, from which air and sea attacks on the Warsaw Pact could be staged or launched, and in which a defeated NATO force could regroup for counterattack.

In addition to her military and geographic strengths, Spain also brings with her a unique political force of considerable importance to the goals and aspirations of the NATO alliance. In the vituperation against the "fascist" regime of General Francisco Franco and the general European distaste for and mistrust of his dictatorial form of government, the fact that Spain has a solid history of anticommunism, particularly anti-Soviet communism, is often overlooked.

To begin with, it is important to remember that anticommunism was the main cornerstone of fascism, a fact that became obscured during the days when we joined arms with Stalin to defeat the forces of consummate evil personified by Hitler and Mussolini. It is significant in this regard also that the only active support Franco provided the

*Iceland, France, and Greece do not now contribute forces to NATO.

Axis during the war was the dispatch of the Blue Division to fight on the Eastern Front against the Russians. Of more immediate concern, however, is the fact that under Franco, militant anticommunism continued unabated in the postwar Spanish government.

More important than the official anti-communism of the Nationalist government, however, has been the history of anti-Soviet communism that pervades Spanish politics across the entire political spectrum, all the way out to the far left. Going back before the Civil War of 1936-1939, when the communists were garnering considerable political strength in the tangled web of Spanish politics of that era, there was a strong anti-Comintern bias to the coalition of the left. Just to the left of center, the major element, the socialists were strongly anticommunist until the pressures of the Civil War drove them into the arms of their former rivals. To the far left, the anarchists were militantly anticommunist. And within the Communist Party itself, anti-Comintern forces long dominated those elements that favored the Russian brand of communism. This bias was again ameliorated by the necessities of war, although even in the worst of times during the struggle of 1936-1939, a strong anti-Comintern element known as the *POUM (Partido Obrero de Unificacion Marxista)* gained many advocates within the Republican ranks.

In the early years of the war, the Soviet influence grew, as Russia provided much needed material assistance and as the Russian-backed elements demonstrated the only truly cohesive political force in the still fragmented Republican ranks. However, from this position of strong advantage, the Russians and their surrogates overplayed their hand by a cold-blooded suppression of the other leftist elements in the coalition. Anarchists, *POUMistas*, and even some who simply showed anti-Comintern leanings found themselves jailed and often executed along-

side Franco supporters who had fallen into the hands of the Republican forces. Seeds of mistrust and even hatred were thus sown in the leftist ranks that later were to bloom in the rich soil of abject defeat.⁶

Spain, therefore, has a political track record of antimonolithic communism which outshines that of the other European democracies.

NATO concerns

The benefits that would thus accrue to NATO from Spain's entry into the alliance would appear to be compelling. She is a strong ideological enemy to the Soviets, a capable military partner with significant geographic advantages, and now a candidate for economic partnership in the Common Market. Yet her admittance to the military coalition of Western states has been barred for over thirty years; and, while there is reason for new hope, she remains uninvited and, from all appearances in some quarters, unwanted. The reasons for this antipathy are numerous, confusing, and in a constant state of flux. A strong argument can be made, however, that none are irreversible if handled with political finesse.

The first and overriding factor that has kept Spain waiting at NATO's door has been her dictatorial, right-wing government, held under the tight control of Generalissimo Francisco Franco until his death in 1975.⁷ The negative reactions his government spawned in the other capitals of Europe have been at various stages as paradoxical and hypocritical as they have been lasting.

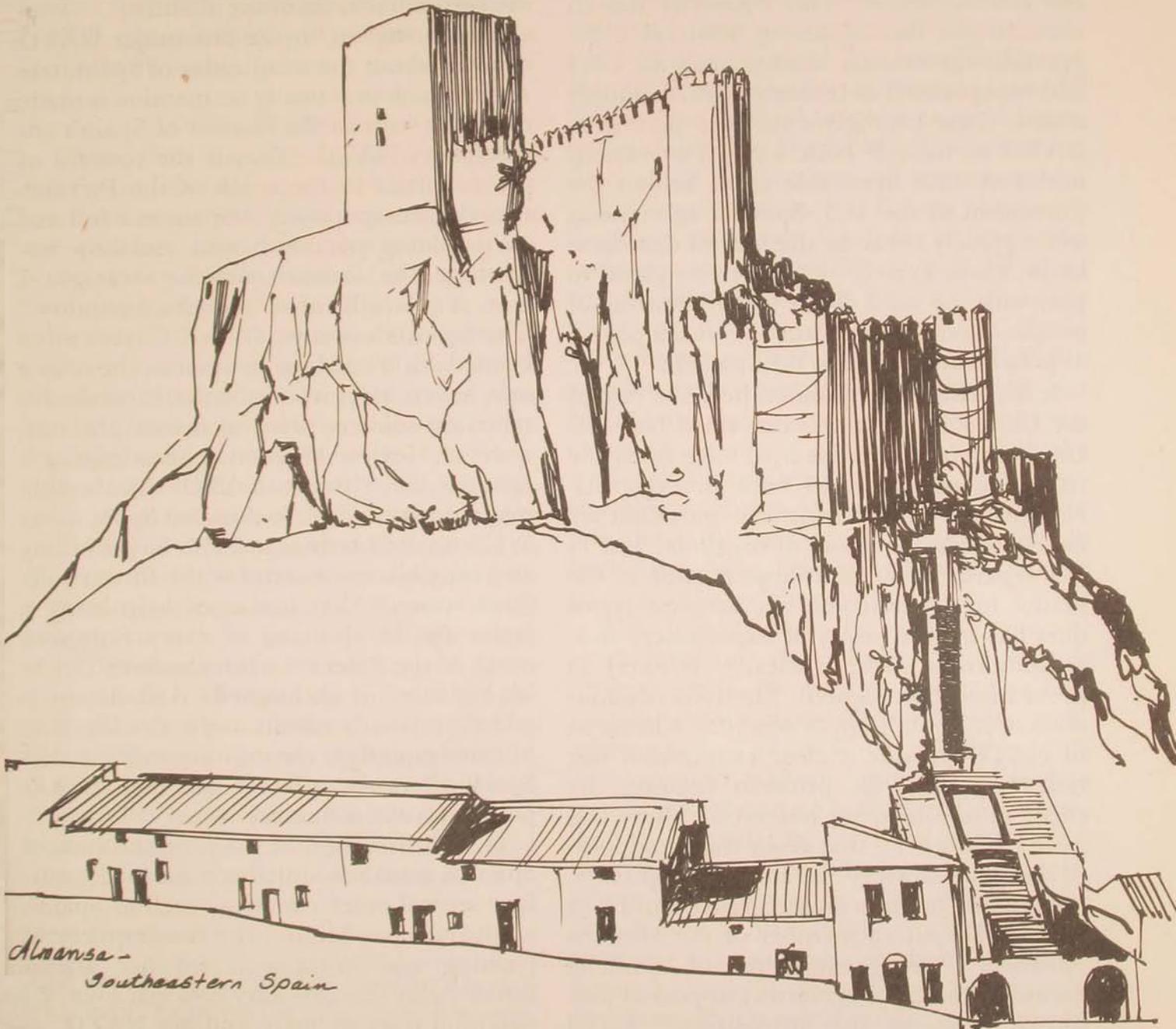
In the early years following World War II, these reactions were clearly bred of Franco's relationships with the German-Italian axis. However, this concern was somewhat exaggerated in light of the very lukewarm support that Franco had provided the Nazi forces, and it certainly became paradoxical at best when both Germany and Italy were

themselves admitted to NATO in the mid-1950s.

What kept the forces in opposition active at that later point was a lingering mistrust of Franco's antisocialism. Being anticommunist, it seemed, was acceptable; however, Franco fell so far to the right that he came afoul of the socialist parties that were in the

ascendancy in countries such as England, Denmark, and Norway.⁸

This political problem was aggravated by the residue of emotional involvement with the Civil War's Republican cause. And it was many of the young idealists who had fought in or supported the International Brigades of the '30s who were now in power



*Almansa -
Southeastern Spain*

in the European socialist parties of the '50s. It thus devolved that while Portugal, under the dictatorship of Salazar (who had actively supported Franco during the Civil War), Germany, the historic enemy of all of Western Europe, and her erstwhile ally Italy were admitted into the alliance, Spain remained unwelcome.

There was, and remains in this animosity, an element of hypocrisy that has always been untoward and which may prove most troublesome before the history of NATO has run its course. This hypocrisy has its roots in the fact of strong bilateral U.S.-Spanish agreements dating back to 1953 and renegotiated as recently as 1976. Simply stated, these arrangements have permitted NATO to have it both ways. The various members have been able to sit behind the protection of the U.S.-Spanish agreements while piously berating the lack of democracy in Spain herself—a dangerous game to play with the most docile and forbearing of people, a potentially fatal one with a people as proud and volatile as the Spanish.

It is pertinent to question here the role of the United States in this one-sided face-off. On the surface we appear to have filled the role of good friend to both protagonists. However, it is in playing this part that we have allowed the game to continue; and in this regard, we share a large portion of the blame for its outcome. In simplest terms ours has been a policy of expediency; and, as with most such policies, it is likely to prove most short-sighted. The 1959 negotiations over Spain's application for admission to NATO provide a clear example of our failure to meet the problem head-on. By then, as one reporter observed, "there was little dispute . . . that from the standpoint of military strategy, strategic integration, and sound common sense, Spain should be a fully participating member of the Western Alliance."⁹ Recognizing this, all countries except Denmark and Norway appeared prepared to accept the proposition.¹⁰ Faced

with this tough challenge, the U.S. took the easy way out and failed to support her loyal and committed ally. Pleading the vital importance of maintaining the unity of the alliance, we failed to aggressively pursue a political solution, electing rather to join the rest of the nations in hiding behind the bilateral agreements which assured Spain's support without offering a NATO quid pro quo.¹¹ This lack of political gumption has proved particularly ironic in light of the subsequent withdrawal of France, one of the earlier bulwarks of the alliance.

This brings us to the last major NATO concern about the admittance of Spain, one about which practically no mention is made today, at least in the context of Spain's admission to NATO. That is the concern of the countries to the north of the Pyrenees that the incorporation of Spain as a full and participating partner would somehow undermine the forward defense strategy, a fear, if you will, of a "redoubt mentality." The Spanish conquistador Cortes once burned his own ships to remove them as a safe haven of escape in order to make his reluctant soldiers press on toward the conquest of Mexico. Without acknowledging it openly, the current NATO membership may find themselves looking on Spain today as Cortes did his ships in 1519. So pervading and tangible is concern for the forward defense strategy that it cannot help being a factor in the thinking of every European north of the Pyrenees when the term "Spanish redoubt" is mentioned. And herein is added yet another irony to the already complicated equation: the military strength that Spain offers the alliance becomes, on the political front, a liability.

In any discussion of the pros and cons of Spanish membership, there inevitably surface several other concerns, such as Spain's economic problems, the inadequacy of training and armaments for her armed forces (with the corollary concern over the potential costs to Spain and her NATO al-

lies to make up these shortcomings),¹² and finally the concern, voiced generally by the political left, that her admittance will upset the status quo in the East-West balance, inspiring a further strengthening of the Warsaw Pact.¹³ While these issues cannot be ignored, they constitute more political strawmen than substantive concerns. The effort of those who would support Spain's incorporation into NATO should therefore be to avoid being sidetracked by arguments such as these and to focus on the major issues of Spain's political posture, her unrequited NATO commitment and concern for the "redoubt mentality."

Spain's Perspective

Those then are the issues that divide NATO on this vital question. Until 1975, or even as late as 1977, any consideration of the question could have stopped here; for Spain under Franco, and for a short time following his death, was unequivocally committed to the NATO cause and unabashedly eager to join. However, NATO has played sanctimonious politics for about two years too long and now finds herself with a potentially reticent candidate for membership. As Prime Minister Adolfo Suarez Gonzalez indicated in late 1977, "Membership in NATO is now a question for the Cortes (Spanish Parliament), or even a question for a national referendum."¹⁴ Whoever would henceforth seek to accomplish this union must therefore address himself to selling the idea to both NATO and the Spanish people, and with every passing day the selling job in Spain is becoming more and more problematical. We are therefore confronted with yet another irony, for as NATO appears to come closer to accepting the proposition, Spain has begun to drift away from it.

Spanish concerns

The issues and forces that tend to discourage Spain from taking this path, however,

have not just recently risen. Some in fact go as far back as the seventeenth or even the sixteenth century, when Spain's decline from a position of preeminence in Europe began, presaged then and reenforced through the next two centuries by a series of disastrous alliances. Spain entered the twentieth century understandably wary of coalition in any form, a policy that she has adhered to faithfully and an attitude that still has strong roots to this day. It might be said, in fact, that Franco's efforts to join NATO were a unique aberration which may well have come and gone, unique not only for Spain in general but specifically for Franco. It seems little appreciated, but the fact is that Franco's avoidance of stronger ties to the Axis in World War II was nothing short of a masterpiece of statesmanship. Given the great debt that Franco owed both Germany and Italy for their military and economic support, without which he could never have won the Civil War, and given the early and dramatic victories of the Nazis, the pressure to throw his lot in with Hitler and Mussolini must have been intense. But NATO appreciated neither his earlier resistance to the strong temptation to join the Axis nor his subsequent break with longstanding tradition and policy in seeking to join the Western alliance. They reacted to both by making Franco and his nation the pariah of the continent.

This brings us to the second factor at work opposing the alliance, and that is Spanish pride. No nation, no matter how patient, can be shunned for 30 years, committing herself all the while, with little or no reciprocation, without becoming more than somewhat reticent to subsequent overtures. And the Spaniards, far from being a forbearing lot, are a proud and volatile people, whose patience can be tried only at high risk. There is little doubt, in fact, that at least one plateau has already been passed. Spain is, henceforth, quite unlikely to petition formally for membership; it will now be

incumbent on NATO to solicit her partnership.

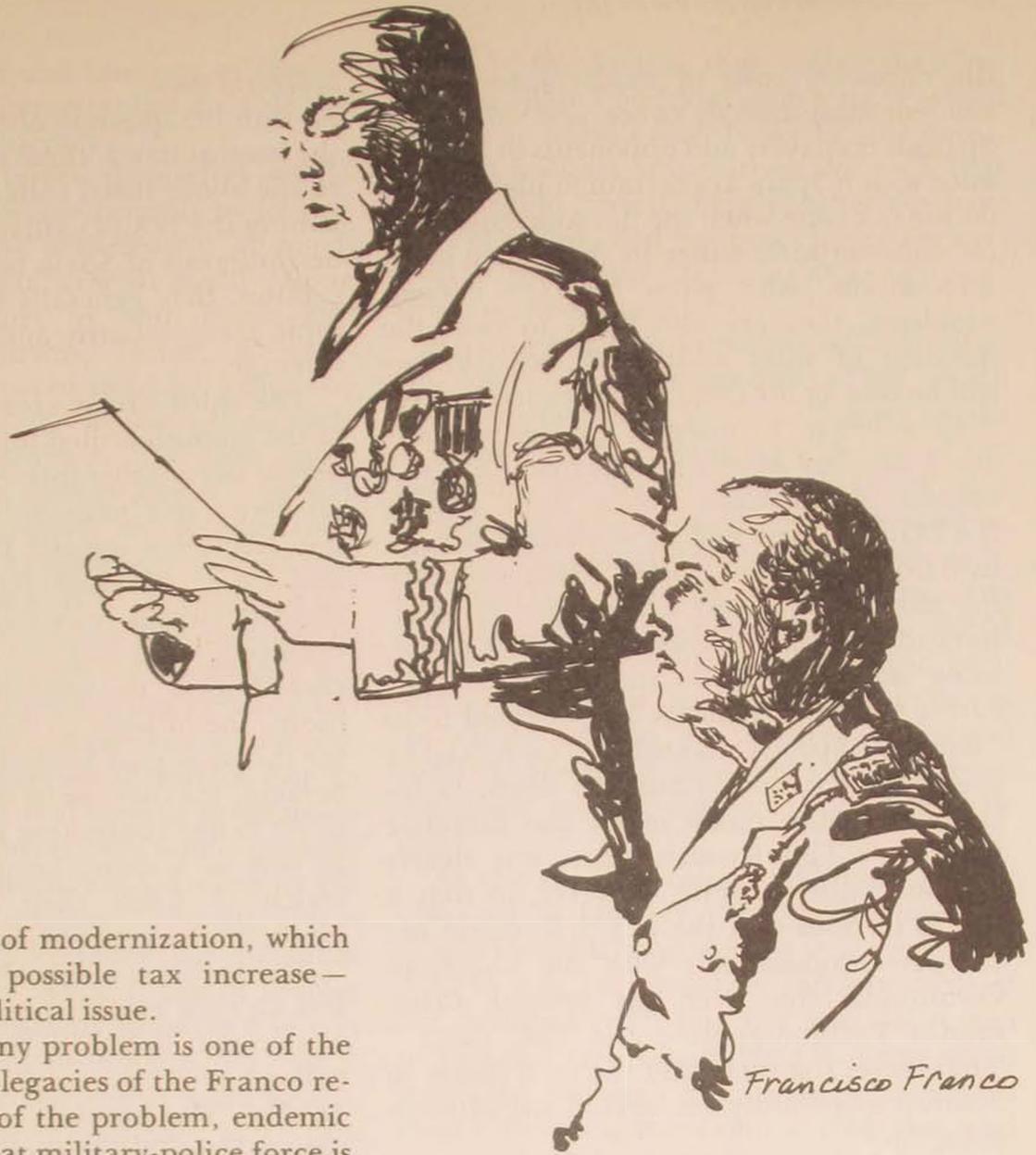
There are a number of other factors at work against this proposal, both internal to Spain and within the realm of her foreign relations. The first and most obvious internal factor is the clearly enunciated anti-NATO policy of the Spanish Workers Socialist Party (PSOE), the second largest and most powerful political element within Spain.¹⁵ While the PSOE currently holds only approximately 34 percent of the seats in the Cortes, it is a force with which the largest party, the UCD (Union del Centro Democrático), must always contend, in that the latter holds far from a majority of the public's support. While the UCD made some minor gains in the last elections, it achieved its near majority with the support of only 35 percent of the popular vote.¹⁶ If Suarez wishes to have a relatively free rein to attack the country's most serious problems, particularly those in the economic area, he must avoid raising other controversial issues which could threaten to bring his government down.¹⁷ In this regard, it is significant that he has avoided making NATO membership an issue.¹⁸ It is of interest to note also, however, that Felipe Gonzalez, the head of the PSOE, in a postelection interview, promised that "his party would try not to force elections within the next four years 'because we believe the country deserves this period of stability.'"¹⁹

While this would appear to give Suarez a little breathing space, there is in the carefully worded promise, the clear implication that Gonzalez reserves the option of challenging any issue of significant import to the PSOE—and a tacit warning to Suarez not to raise any such issues. However, in view of Suarez's near majority in the Cortes and the fact that moderate socialists do not support the non-NATO policy, a vote in the Cortes would appear to have a good chance for success. In that the UCD popular vote percentage (35 percent) was much lower

than the 48 percent share of the Cortes seats won by the party, a referendum might prove a less certain route to go and a greater political gamble for Suarez. On the other hand, the Spanish voters have overwhelmingly approved every proposition advanced by the government since 1967. So given the UCD's present momentum, this approach, too, should prove successful if the necessary political spade work is properly accomplished; and it would clearly constitute a more visible and binding commitment by the whole Spanish nation. While it would involve a slightly greater political gamble, it would promise commensurately greater rewards.

While Prime Minister Suarez has essentially decoupled himself from open advocacy, members of his party are working behind the scenes to accomplish the union. Further, specific steps are being taken at least to neutralize the opposition of the PSOE, if not achieve its tacit support. On the national level, the UCD is using the PSOE's anti-NATO position to undermine that party's unity, seeking, through a low-profile campaign, to alienate more moderate members who see their party's position as being Soviet-sponsored.²⁰ Meanwhile, the UCD is also working for support on the international scene. For example, at a North Atlantic Assembly held in Portugal in December 1978, a Spanish senator, a member of the UCD, was in attendance with the expressed purpose of soliciting "support for Spain's membership in NATO." He further indicated his intent to seek assistance from the pro-NATO Portuguese Socialists in an effort "to influence the Spanish Socialists to change their minds and support membership."²¹

However, it will probably take more than that and may well involve a Cortes vote or the national referendum alluded to by Suarez. For there are other political factors operating against the proposal, two key ones of which revolve around the military, namely the internal orientation of the army and



the probable costs of modernization, which would portend a possible tax increase—never a popular political issue.

The internal army problem is one of the decidedly negative legacies of the Franco regime. It was bred of the problem, endemic to dictatorships, that military-police force is invariably required, in perception if not in fact, to maintain the power in the hands of the dictator. While he had two strong paramilitary police forces, the Guardia Civil and the Policia Armada, charged with the mission of internal security, Franco still tended to look toward the army itself, the force which had brought him to power, to ensure the stability of his regime. The army in turn therefore tended toward a more internal orientation, more toward its mission of "the defense of institutional order" than that of maintaining national security.²² This problem was aggravated by the loss in 1975 of the mission of providing security within the borders of Western Sahara (formerly Spanish

Sahara). The army, already, in the view of many, too involved in the internal affairs of continental Spain, now found itself without any substantial external counterbalance.

Beyond the internal army question is the more important and politically significant question of the cost of modernization.²³ The Spanish armed forces are poorly equipped in terms of both quality and quantity. As mentioned earlier, this creates a problem for NATO, but more to the point, it presents a problem for the Spanish people. While both parties will have to help defray

the necessary costs of modernization, the element most directly concerned will be the Spanish taxpayer; and opponents of the alliance within Spain are certain to play heavily on the tax issue when the question comes up for consideration either in the Cortes or by referendum. And given NATO's current problems, they are also likely to raise the question of what additional security they will be buying for these added expenditures.

In addition to internal pressures, there are a number of external factors that will operate to dissuade Spain from joining NATO. The first and most obvious is pressure from the Soviet Union, which is becoming much bolder and more direct in its efforts to lure Spain from the NATO camp, using both the carrot and the stick. The carrot is what *Newsweek* has referred to as "Russia's Spanish Gambit," comprising promises of tempting business deals, to include attractive credit terms and lucrative markets.²⁴ This Russian effort was clearly doomed from the start, however, in that it was so obvious that the U.S.S.R. could not compete economically with the European Community that even the Spanish Communist Party supported the EEC move.²⁵ That leaves the stick; and the tacit threat to Spanish sovereignty lies behind any Moscow move.²⁶

The last force that could incline Spain toward remaining outside of NATO is the potential inducement to join a nascent southern Europe pact. There is not much literature on the subject; however, vague allusions to such an alliance are beginning to appear in various writings.²⁷ It may well be just a gleam in the eye of the yet-aborning coalition of Eurocommunist nations. However, this is an interesting possibility that bears careful watching, in that the potential members, namely Italy, France, Spain, and Portugal, all lie on or adjacent to NATO's southern tier. Such a development would obviously have far-reaching and complex implications for NATO.

benefits to Spain

As with the question of NATO's position on the issue at hand, there are pros, as opposed to the above-listed cons, which suggest that joining the NATO alliance would be in the best interests of Spain herself. With one exception, they generally fall into two broad topic areas: security and economic-political leverage.

The third broad area involves the status of the Spanish armed forces themselves, and herein lies another interesting paradox. The air force and navy are progressing slowly but resolutely toward both modernization and closer ties with NATO; and each of these services is realizing real benefits from both programs that improve their potential contribution to Spain's defense. Furthermore, the officers of the junior services are for the most part receptive to NATO membership, for they see in this step the promise of yet better equipment and better training, as well as a clear, unqualified mission on which to focus their efforts—three big pluses for Spain as well as for NATO.²⁸

The paradox is that the army, which suffers an even greater need for more modern equipment and a substantive mission, is balking at the prospect of the NATO connection. The problem, as discussed earlier, derives from her internal orientation and is aggravated by the lack of a real mission since the loss of Spanish Sahara. At its core, however, is the pride of the senior Spanish officers who are reticent to surrender the positions of prestige and power they hold within the nation's infrastructure. While, on the surface, this poses one of the major roadblocks to Spanish acquiescence to union with NATO, it in fact holds the key to what would be a major benefit for the Spanish government and people, who would clearly like to return the business of justice and order to the courts and police agencies. Membership in NATO, and the army's subsequent shifting of its focus of attention to the international arena, could therefore

very much serve in the interests of Spain's continuing efforts to reestablish a viable, internally secure democracy.

Spain's armed forces themselves would also realize considerable benefits by joining NATO through the achievement of much needed improvement, at what could well be minimal expenditure by both Spain and NATO. This economic factor, as mentioned earlier, is a problem which cannot be ignored. However, it can be persuasively argued that the problem has been exaggerated, that Spain already spends a greater percentage of her GNP on defense than most current NATO members, that what is needed are the benefits of joining NATO in the Long Term Defense Plan in order to ensure maximum return on the money she does invest. Concurrently, her pending admittance to EEC should give her added economic leverage that would enable her to meet the 3 percent real growth program to which NATO membership would commit her, without significant tax increases or the threat of further inflation. Conversely, it is also of interest to consider the potential costs of neutrality. While it would require a comprehensive analysis to prove one way or the other, it can be conjectured that it would cost Spain considerably more to support independently the military force that would be required to maintain a credible neutrality.

The second major benefit for Spain would be the enhanced political leverage that membership in NATO would bring. To regain her rightful place in the councils of Europe, Spain must join NATO as a full partner, and down deep she aspires to that rightful place and knows that she must join NATO to achieve it. Her estrangement from the high politics of Europe has been an unnatural state of affairs which is long overdue for change.²⁹

But by far the most important benefit an alliance with NATO would bring Spain is enhanced security. It can be argued,

and is by the Soviets, that, rather than improving Spain's position, such a move would put her in harm's way. However, the political and military imperatives are such that she will find herself there whether she joins NATO or not, and her best chance for survival is to achieve the mutual security offered by the alliance.

Barring a failure to renew the U.S. bilateral treaty when it comes due in 1981, Spain has made herself a *de facto* enemy of the Warsaw Pact by permitting U.S. use of her ports and air bases; thus her status as a member of NATO could not aggravate an already consummate enmity. But even without the U.S. bilateral commitment, any Spanish effort to remain neutral would prove inevitably futile. Her strategic position simply makes her an irresistible target for either side in any future continental conflict. She must choose to go one way or the other; and the choice for her should be clear.

As the then minister of Foreign Affairs observed in January 1976, Spain intended to join the EEC, and she was well aware that NATO was "the military infrastructure of the community."³⁰ She has now petitioned to join that community, and in doing so, as indicated earlier, she made a conscious choice between the Common Market and economic affiliation with the U.S.S.R. Assuming that the EEC acts favorably on the recommendation of its commission, Spain will clearly assume a vested interest in protecting the community and its interdependent economic structure. It could be argued that she might follow the independent path chosen by France; however, Spain does not own and has no prospects of owning her own force de frappe. So this, too, seems an inappropriate course for her to pursue.

All of which leads back with inexorable logic to the proposition that membership in NATO is indeed in Spain's best interests from the all-important security standpoint. Spain needs NATO to secure her economic

and political future, and NATO has come to sorely need Spain's support in order to be in a credible position to provide that security.

New Factors

The Spanish question has lingered on now for over thirty years, and most of the basic issues of concern then remain those of concern today. There have, however, been some rather fundamental changes in the complexion of these issues, the great bulk of which should shift the balance well in favor of Spanish admission to the NATO alliance and some of which in fact urge the expeditious resolution of the issue.

The first change has been the unprecedented and to-date effectively unanswered increase in both the quality and quantity of Warsaw Pact forces. This improvement program has tipped the combat power ratio perilously far toward the Warsaw Pact side, to the extent that it is now estimated that the Pact possesses the 3:1 advantage required for a reasonable chance of success in an attack against a well-organized, cohesive defense, much less against the less-than-optimally postured NATO forces. In a more specific sense, with regard to Spain, the improved range of the fighter and fighter-bomber aircraft of the Pact has brought all but a few of the current NATO and French airfields within range of the Pact attacking forces. Thus the availability of Spanish bases for staging, recovery, and other vital air operations has taken on added meaning for the continental allies as well as for the United States.

The next most significant change in the military balance lies in the loss of the coordinated support of France and Greece, together with the U.S. alienation of Turkey and the subsequent deterioration of her forces. These losses are compounded by Italy's growing economic crisis, the increasing Soviet presence in the Mediterranean, the loss of Malta, and the socialistic leanings

of Libya and Algeria, which propel them closer to the Communist bloc. Taken together, these changes have made the unfavorable shift in balance on NATO's southern flank even more dramatic and potentially disastrous than that of the Central Front.

These new factors, all on the negative side of the ledger, urge speedy and substantive adjustments on the part of NATO. The alliance has put a great deal of effort into the development of a long-term solution; however, for the immediate future, the only available option that promises rapid, tangible results would be the acceptance of Spain into the Western military community.

Fortunately, there have also been a number of favorable changes, all of them involving Spain's economic and political status. The most significant, of course, has been the emergence in Spain of a government that has made remarkable strides toward the achievement of truly representative government. There are still a few who feel that not enough progress has been made in this sensitive area, but the number of critics dwindles with each passing day and each new step forward.

Conversely, Spain's new-found political freedom also argues for expeditious denouement from a negative standpoint. For this brief moment in history may find those in Spain who are in favor of joining NATO at the zenith of their power or, more important, those opposed at their nadir. Spain's economic and political problems are the kind that provide fertile ground in which the seeds of socialism and comunism quickly germinate.³¹ In addition, the last time Spain had a go at democracy, in the early 1930s, her politics proved most volatile, with parties at both ends of the spectrum on occasion supporting their erstwhile opponents and the seat of power swinging from one side of center to the other in relatively rapid and dramatic fashion. Some things are different today, but a great many of the basic conflicts and controversies remain essential-

ly unchanged from what they were almost fifty years ago. The decision to go at the problem in anything approaching a leisurely pace might therefore prove a bad gamble. The Socialist promise to support stability for four years combined with the current split in its ranks on the NATO issue also argues for striking now.

The final change of potential significance, and happily a positive one, was the favorable report by the EEC commission concerning Spain's admission to the Common Market. The final move by the EEC, which now seems assured, should do more than any other single event to persuade all parties concerned of the desirability, if not necessity, of accomplishing a corresponding military coalition, in order to ensure the security of the joint economic interests of both parties.

THE answers to the questions "when" and "how" are, simply, "soonest" and "through an aggressive, enlightened and well-organized U.S. political-diplomatic effort," starting with initiatives to accelerate Spain's acceptance into the Common Market. Time is of the essence, however; as the inertia bred of years of inactivity weighs heavy on NATO, Spain becomes more independent and reticent, and U.S. prestige and leverage continue in decline. It is therefore urgent that we act now; and there is an added inducement to undertake this action, within which lies the final irony of the Spanish-NATO equation—one that finally promises

a favorable result for the U.S. For should we be able to accomplish this aim, not only would we take a significant step toward restoring a semblance of balance to the Warsaw Pact/NATO power ratio but we could also in the process reverse all of the forces working against the achievement of this goal; that is, NATO inertia, at least in this one realm, would have been reversed; centralist political elements in Spain would be given a boost in their competition with the Socialists-Eurocommunists; and, finally and perhaps most important, U.S. prestige and credibility in the international arena would experience a sorely needed boost. But it will not come easily—it will take a delicate diplomatic touch, enlightened political planning, and plain hard work. Spain and NATO both wait to see whether we have the necessary measure of each—and I suspect that they both hope that we do, that they are even pulling for us—which just may prove the most important thing we have going for us.

It is also certain that the Soviet Union and the Warsaw Pact watch with equal interest; that they will be working hard to balk our efforts; and that, if we are to pull it off, they will make us work for it, even if our allies do not. The effort, however, will be well worth the price, because success would bring us greater credibility in the eyes of these, our potential enemies; and credibility in that realm is a negotiable instrument—directly convertible into deterrence.

Air War College

Notes

1. John Fullerton, "Spain, for the First Time in Centuries, Is at a Decisive Strategic Crossroad," *Defense and Foreign Affairs Digest*, 3/1978, p. 4.

2. International Institute for Strategic Studies, *The Military Balance, 1978-1979* (Dorking, Great Britain: Adlard & Son Ltd., Bartholomew Press, 1978), p. 30.

3. Squadron Leader D. C. Martin, "Spain and NATO," *The Hawk*, Winter 1978-1979, p. 33.

4. Admiral Horacio Rivero, "Spain: Free World Asset," *Strategic Review*, Spring 1976, p. 69.

5. "1978—Economic Review of Spain," *Quarterly Economic Review of Spain* 1 (1st Quarter 1979): 6.

6. Hugh Thomas, *The Spanish Civil War* (New York: Harper & Row, 1977). The material in this paragraph summarizes a large section of this definitive work on the Spanish Civil War.

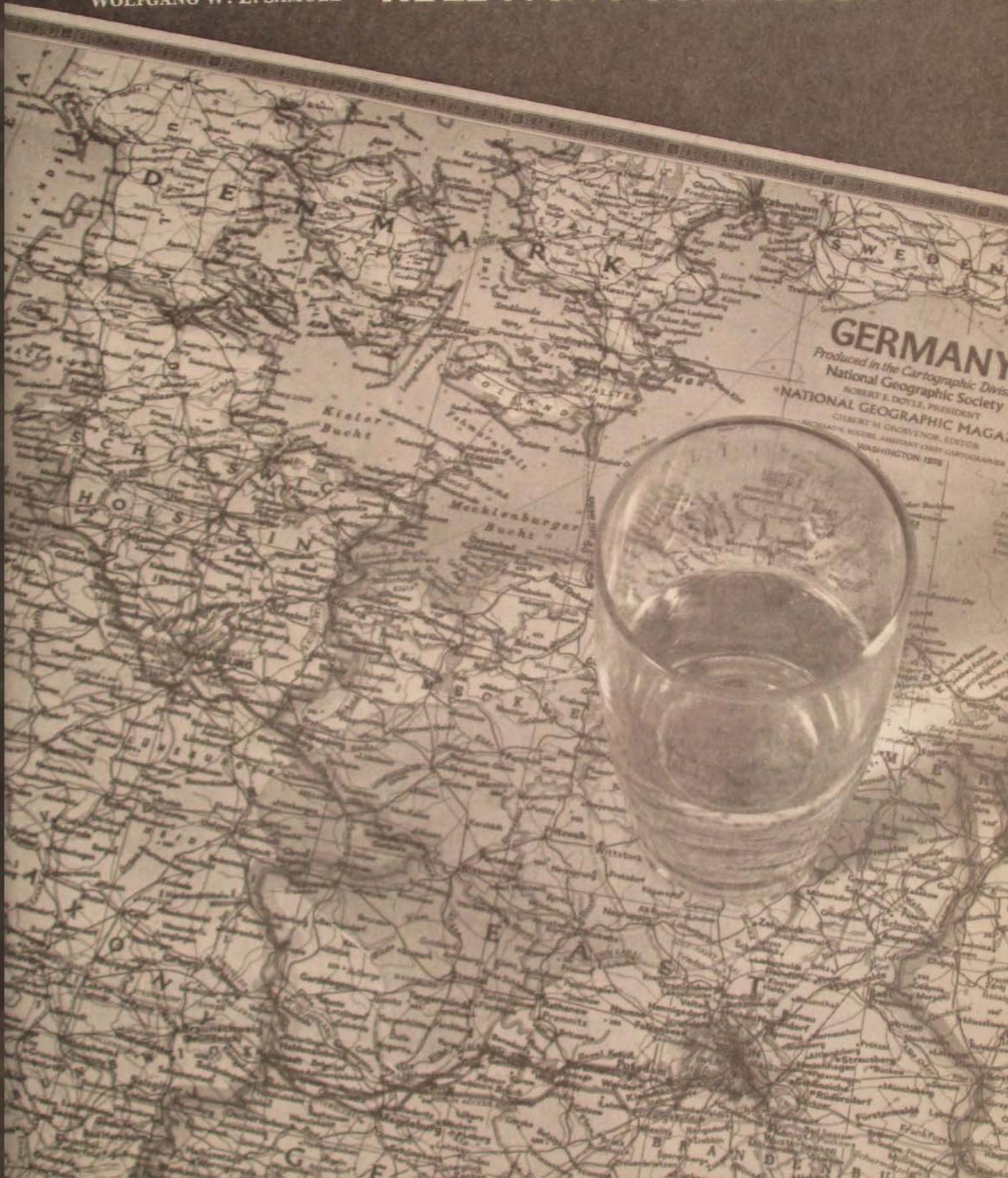
7. General T. R. Milton, "NATO Membership for Spain?" *Air Force Magazine*, February 1977, p. 40.

8. Robert Pell, "NATO and Spain," *America*, 20 June 1959, p. 449.
 9. *Ibid.*, p. 450.
 10. "Current Comment: Spain Is West . . . and NATO?" *America*, 14 May 1960, p. 234.
 11. Pell, p. 450.
 12. Captain R. A. Komorowski, "Spain and the Defense of NATO," U.S. Naval Institute *Proceedings*, May 1976, p. 196.
 13. Fullerton, p. 39.
 14. John F. Coverdale, "Spain from Dictatorship to Democracy," *International Affairs*, October 1977, p. 629.
 15. Fullerton, p. 30.
 16. "Spain—Government Wins Elections," *Facts on File*, 16 March 1979, p. 191.
 17. "Worldgram," *U.S. News & World Report*, 12 March 1979, p. 40.
 18. Fullerton, p. 30.
 19. "Spain—Government Wins Elections," p. 191.
 20. Fullerton, p. 30.
 21. "Spain in NATO?" *Atlantic Community News*, December 1978, p. 1.
 22. Stanley Meisler, "Spain's New Democracy," *Foreign Affairs*, October 1977, p. 200.
 23. Miguel Acoca, "Spain's Lagging Democracy," *Washington Post*, 27 November 1977, p. C-3.
 24. Fullerton, p. 39.
 25. "1978—Economic Review of Spain," p. 6.
 26. Rivero, p. 6.
 27. Fullerton, p. 39.
 28. *Ibid.*, p. 30.
 29. Pell, p. 449.
 30. Antonio Sanchez-Gijon, "Spain and the Atlantic Alliance," *Royal Air Forces Quarterly*, Spring 1977, p. 65.
 31. David B. Richardson, "Spain's Free Election—Now a Move to 'Join Europe'?" *U.S. News & World Report*, 27 June 1977, p. 30.



THE IMPOSSIBLE TASK — DEFENSE WITHOUT RELEVANT STRATEGY

LIEUTENANT COLONEL
WOLFGANG W. E. SAMUEL



*Who asks whether the enemy
were defeated by strategy or valor?*

VIRGIL

THE North Atlantic Treaty Organization (NATO) has undoubtedly been one of this country's most successful regional military and political alliances. Therefore, it is all the more astounding that after thirty years of organizational viability, responsible observers on both sides of the Atlantic strongly suggest that the alliance has such critical military deficiencies that its ability to deter war, not to mention fighting one, is at best marginal. Bluntly stated, NATO is viewed by many thoughtful observers as being too weak militarily to counter effectively the potential threat facing it.¹ Major General John Singlaub, U.S. Army, retired, in an unintentional but appropriate summary of such criticism stated, ". . . in the event of a major conflict in Western Europe, NATO's forces could fight no more than a holding action."²

Such an assessment is all the more amazing in view of the vigorous and significant defense upgrade efforts by most members of the alliance in recent years to improve their military forces and conventional warfighting capabilities. To cite only a few major examples, Holland, Belgium, Denmark, and Norway are replacing their aging combat aircraft with much more capable F-16 fighters; Germany, Denmark, and Canada, among others, proudly point to new Leopard main battle tanks (MBTs), described by many experts as the best tank in the world. Holland and Germany are equipping with the new, mobile, and highly accurate radar-guided Gepard short-range, twin-barrel anti-aircraft *Flackpanzer*, and U.S. Air Forces in Europe are introducing the highly touted F-15 air superiority fighter and A-10 close air support aircraft in sizable numbers. Improvement efforts of this scope are evident in all of the services of alliance

members in the Central Region, the critical region in NATO past and present. With such highly visible defense improvement efforts, it seems almost paradoxical to speak of a major military weakness in NATO. What, then, are we really talking about when we speak of military strength or the lack of it? Do we mean that even more and still better tanks and aircraft are needed? Do we need more and better trained men? Or are we in fact talking about whether we are or are not employing what we already have in the most rational manner in today's strategic and tactical nuclear environment?

I believe there is a strong possibility that with a return to some time-honored and proven principles of military leadership and force management, a change in perspective of NATO's ability to defend itself is possible without spending ourselves into an either/or situation; that is, either guns or butter, not both.³ A much publicized and often quoted 1977 Senate report reviewed NATO and how its forces related to the Soviet threat. Its findings and recommendations were in terms of the current strategy of flexible response. However, in a brief introductory sentence, the report got to the heart of NATO's ailment by stating that perhaps even NATO's strategy itself is questionable.⁴ My purpose is to pursue this suggestion and propose an approach to Central European and, therefore, U.S. conventional defense efforts that may make the alliance more viable in the future and better able to fulfill its mission of deterring overt war; but, if necessary, to deny an aggressor any gains should war occur. My intent also is to promote thoughtful debate on a vital subject as opposed to offering definitive and pat prescriptions for NATO's real or imaginary ailments.

On Numbers and Their Value

Military comparisons between Warsaw Pact (WP) and NATO conventional combat

Force Management

Principles of War or good force management were accumulated by successful commanders over time. They are not hard and fast rules but represent cumulative wisdom, major violation of which has proved to be an unwise choice. Clausewitz initially listed five such principles (objective, offensive, mass, economy of force, and mobility), later adding to them the elements of surprise, morale, and exploitation. The Soviet Union surprisingly adheres to only one of the Clausewitzian principles, morale; in line with its penchant for centralized control, detailed planning, and application of massive force, it subscribes to a set of principles shared by no one else: quantity/quality of divisions, armament, ability of commanders, stability of the rear. U.S. forces generally subscribe to all of the five original Clausewitzian principles and in addition to the element of surprise also accepting unity of command, coordination, security, and simplicity as basic good management principles. Current NATO strategy emphasizes mass and through a plethora of command structures and a doctrine of forward defense deemphasizes such force multipliers as surprise, maneuver, initiative, and simplicity.

W.W.E.S.

forces normally are expressed in terms of such simple quantitative indices as numbers of MBTs, armored fighting vehicles (AFVs), tactical aircraft (TACAIR), surface-to-air missile (SAM) systems, and whatever else lends itself to reduction to a chart or graph. For instance, a cursory review of only a few such indicators of supposed military strength or weakness gives a disheartening impression that NATO combat capability is not only inferior to that of the Warsaw Pact but apparently dangerously so in some respects.⁵

Such a simplistic, although often used, quantitative analysis of the relative strengths of two opposing camps has some obvious value. One major flaw of mere force comparison analysis, however, is its failure to reflect qualitative and organizational differences, nor does it make allowances for such perishable but important factors as training, morale, or leadership, to mention only a few. That weapons alone do not make armies was amply demonstrated in very re-

cent times by the Iranian armed forces. Therefore, the conclusions to be drawn from side-by-side comparisons of equipment and forces are necessarily limited and, in good conscience, should always be so identified. In fact, given the weight of other than simple quantitative factors, the apparent inequities posed by the quantifiable numbers are significantly less than revealed by casual observation.

Numerical inferiority is not of itself an indicator of inferior combat capability. The fundamental axiom underlying such a rationale is the often-held belief and cliché that the side with the larger battalions wins. While frequently a valid statement in attrition-type warfare where the size of the force may be far more important than its imaginative employment, a historical review rather convincingly suggests that skilled generalship can many times compensate for unfavorable imbalances in the size and technical capabilities of forces. Although the Persian

army of Xerxes, more than 200,000 men accompanied by a fleet of 1500 agile warships, enabled him to occupy Athens in 480 B.C., it was not enough to save him from defeat by a vastly outmanned but not outgeneraled Hellenic alliance. In 1940, German Field Marshal Karl von Rundstedt's 2574 tanks, outnumbered by 3609 allied tanks of generally superior quality, made military history by their brilliant dash to the Channel.⁶ The "invincible" forts of the Maginot Line, with their large garrisons prepared for head-on, attrition warfare, sat inactive and unable to enter into or influence the conflict. Who would have seriously questioned the value of that magnificent fortification prior to the debacle; but the lesson, although often quoted, is less often understood. Certainly it is little heeded today at a time, in some respects, not so different from 1939. It can be argued that a new Maginot Line has again evolved in Central Europe, while not as visible and formidable as its predecessor, just as vulnerable. That new line is the current NATO strategy of flexible response with its doctrine of forward defense. This doctrine may pose a greater threat to NATO than any real or perceived Warsaw Pact

numerical inequities in weapons or men because it does not recognize that combat power is not a function of mere numbers but a combination of tangible and intangible factors.

From the point of view of the traditional attritionist, NATO forces represent, if one may be permitted an analogy, a glass of water half empty—never able to defeat the enemy's forces in a massive head-on clash of arms. It should not be argued that the NATO glass of water is half full—the view of the optimist with rose-tinted glasses—but rather it is suggested that the water in the glass is adequate when viewed in a different glass. The difference is not only one of perception but is one fundamental to the continued future effectiveness of America's key alliance.

MC 14/3 or Flexible Response

Underlying the current NATO combat doctrine of forward force deployment is a strategy whose very name is a misnomer, flexible response. The official name is MC 14/3. It does not mean, as one might expect, flexibility of conventional force employment, but rather it describes an escalatory force scenario from the employment of conventional weaponry to that of tactical nuclear weapons with the explicit possibility of the ultimate nuclear exchange.⁷ The strategy is indeed flexible when compared to its predecessor MC 14/2, the strategy of massive retaliation,⁸ but like its predecessor it also has by now outlived its usefulness and no longer reflects the strategic or theater nuclear situation. Additionally, MC 14/3 incorporates a doctrine of forward force deployment that may have been appropriate for the late 1960s and early 1970s, when U.S. theater nuclear forces were only poorly matched by Soviet assets. Today, such a concept flies in the face of reality and almost guarantees the destruction of NATO's conventional forces while NATO no longer

*Military comparisons between
the Warsaw Pact and NATO*

	Northern and Central Europe	
	NATO	Warsaw Pact
MBTs in operational service	7000	20,500
TACAIR in operational service	2350	4200
Artillery of all types	2700	10,000
Ground forces available in peacetime; division equivalents	27	47
Combat manpower in all types of formations	626,000	943,000

possesses the leverage once enjoyed through a near monopoly of tactical theater nuclear weapons.⁹

The doctrine of forward defense no longer supports a strategy but rather has *become* the strategy for NATO. Under it, conflict is expected to be joined on a broad front from Lübeck to Passau, with NATO forces engaging the attacker immediately over the entire front. The purpose of such an exercise is to start what some defense analysts call "the business of attrition" as soon as possible,¹⁰ conveniently forgetting that in that area the Soviets hold all the trumps and that attrition is indeed a two-edged sword cutting friend and foe alike. Critical to the success of NATO and its thinly stretched lines under MC 14/3 is the early determination of where precisely the major Soviet thrust (or *schwerpunkt*,* as the Germans so aptly describe it) occurs so that forces can be concentrated and employed in the right place and in a timely manner *before* they are fully engaged by the enemy. However, the crucial elements of space, time, and resources, underlying any strategy, in the current NATO situation have their potential significantly degraded through forward force deployment and have been made, in a manner of speaking, to work for the aggressor rather than against him.¹¹ This situation is tacitly acknowledged by NATO strategists, few of whom expect conventional defensive measures to be successful against a Warsaw Pact attack. The tactical nuclear weapon is perceived as the ready fall-back position for all conventional force deficiencies. Beyond that lies little of comfort to friend or foe alike.

Although the day has long passed when the United States and its allies had superior nuclear forces and could field land, sea, or air forces numerically superior to those of the potential enemy, NATO's strategy has

continued to maintain a curious mixture of nuclear bravado and what one author calls a style based on the methods of attrition at a time when the prerequisites for successfully waging either type of warfare, nuclear or conventional attrition, no longer exist.¹² Then why the insistence for a strategy that offers little or no advantage to the defense? Unfortunately, the answer is not all that logical but lies within those essential elements of space, time, and resources.

- *Space* or the lack of it in the Central Region is a basic reason for a forward defense doctrine. Although the "book" on maneuver warfare, Blitzkrieg, was "written" in nearly the same geographical area and in less space than now available, today that same space no longer seems to offer sufficient depth or room for maneuver. The French in the 1930s faced the same problem and resolved their dilemma by building a line of fortifications as close to the German border as possible. When war broke out in 1939, Allied forces received ample strategic warning of attack; even the place of the main thrust was presumed to be known. The formidable fixed defenses of the French as well as some remarkable Belgian capabilities¹³ were backed up by two large mobile army groups, including the British Expeditionary Force (BEF). There was ample time for mobilization. When the expected attack materialized, its main thrust was incorrectly identified as coming through the Low Countries when in fact it materialized much farther south. The mobile element of the Allied forces was prematurely committed to the wrong battle; it was broken and disorganized in piecemeal engagements with only one memorable act, the brilliant rescue of the BEF from the beaches of Dunkirk. The Maginot Line later received the blame for what happened when in fact the commanders of the Allied forces had exhibited much greater rigidity than the line of forts was ever capable of. The space (depth) the

*Literally, it means "thrust point." In context, *schwerpunkt* usually designates both the axis and direction of the main offensive effort.

French had gained through forward defense was achieved at the expense of the more crucial element, time, to determine the enemy's intentions. The hurried analysis of information available guided by grievous misconceptions was obviously wrong.

Although today is not 1940, the similarities are all too striking in terms of space management and force dispositions. In 1940 the Allied armies were actually much better positioned to wage forward defensive warfare than NATO's are today. The problem of the Allied forces then, however, is the same as the one faced by NATO commanders today—to identify positively and in a timely manner the main thrusts of the enemy's forces. There is no convincing indication that the current strategy has solved that critical problem; rather, forward defense helps to compound it.

- *Time* then becomes a much more critical component of a forward defense strategy than space alone; that is, enough time to decipher the enemy's intentions. Historically, one stands on weak ground when maintaining that the attacker's intentions will be known in a timely manner to take swift and appropriate countermeasures. The French and British were unable to identify the true German thrust in 1940. The Germans were equally ineffective at identifying the site of the Allies' main force landings on the coast of France in 1944. In both instances it was known within reasonable limits when the attack was forthcoming, but the how and where remained largely hidden until too late to react effectively. While today's means of gathering information are significantly more subtle and advanced than in the 1940s, they are still little better than others in the past in deciphering enemy intentions. Even if Field Marshal Fedor von Bock's thrust into the Low Countries had been viewed from reconnaissance satellites and the information made available in a timely manner to those who could have acted on it, it is doubtful that this

powerful attack would not have been diagnosed as the main attack. The inclination to act contrary to one's preconceptions and against established and practiced plans is probably never a strong one, unless there is convincing evidence to the contrary. Sufficiently convincing evidence usually arrives too late for effective military actions.¹⁴

Forward defense as now envisioned in NATO would result in the rapid engagement of screening forces as well as the main body before the enemy's intentions are known and before he has irrevocably committed himself to a course of action. To disengage after such knowledge is gained, while troops are still locked in combat, is indeed a skillful and daring maneuver—one so demanding that only few generals have ever attempted (much less completed) it successfully. The essence of the NATO problem is not warning of attack or to determine that it is in progress, but rather it is to ascertain the attack's strong points, its *schwerpunkt*, before the ability to react effectively is no longer there.

- *Resources*, human and material, represent the wherewithal for whatever strategy is employed to counter an attack. According to NATO critics, they are often inadequate in both quantity and quality. Under the present strategy one cannot help agreeing reluctantly although U.S., German, British, and Canadian combat elements look anything but weak when examined closely by a dispassionate observer. The problem for these forces is one of poor employment or strategy; of having to cover too much border with too small a force; of being too close to the object they have to deal with; of being unable to see beyond the haze of the local battle. All in all, the substantial allied force, well equipped and well trained by almost any historical peacetime standard, is patently insufficient to do the job now assigned it: matching Soviet mass with equal mass, the job of attrition warfare. That shortcoming constitutes the basic mal-

aise of the current situation. The relationships of space, time, and resources are grossly imbalanced and seem to call for something other than forward positioning of forces and, when failure overtakes them, rapid escalation to nuclear warfare. These key elements beg for reexamination of fundamental strategy and new initiatives to bring them once more into their proper relationship.

Why Are We in This Situation?

Unfortunately, it is not a simple matter of finding a guilty party. There are no scapegoats. The current state of affairs evolved over time from 1945, when the United States had and for many years thereafter maintained an effective monopoly on employable means of mass destruction—in this case, nuclear weapons. But in a day when strategic systems of the two major powers face each other in awe-inspiring impotence and when tactical nuclear weapons are now equally available to either side, NATO has lost its last trump card. The tactical nuclear weapon no longer represents a viable alternative to buttress insufficient conventional forces. Its utility in the face of equal or superior Soviet capabilities is markedly degraded. Through their determined buildup of theater nuclear and conventional forces, the Soviets are now equipped to wage war under all conditions (conventional, theater nuclear, strategic nuclear, and chemical). They have finally achieved the option to attack with or without the support of tactical nuclear weapons, in fact, leaving the choice to NATO and thereby effectively having neutralized the tactical nuclear leg of the NATO triad.¹⁶

The Soviet evolution in strategic and tactical force capabilities, nuclear and conventional alike, is the reason for the impotence of the current NATO strategy. The reason NATO continues to cling to the dated strategy of flexible response and its accompany-

ing doctrine of forward defense is not dictated by such mundane factors as space, time, or resources but by a West German political choice for forward defense. The depth of German feelings on the subject can be judged from a response to proposed alternative approaches during a 1978 roundtable held in Washington, D.C., jointly sponsored by the Konrad-Adenauer-Stiftung and the Institute for Foreign Policy Analysis. A summary report of the roundtable states:

German participants were emphatic on the unstinted imperative of a NATO forward defense posture. They characterized forward defense as the original *quid pro quo* for the Federal Republic's entry into the Alliance. If NATO were to abandon this concept in its posture or doctrine, they warned, the Federal Republic would have to reassess its political options, including the alternative of broad accommodation with the East.¹⁶

It is indeed strange for the Federal Republic of Germany (FRG) to insist on being the primary future battleground between NATO and the Warsaw Pact in a scenario potentially rivaling the destruction experienced by many of its cities in World War II, only on a much wider scale. Granted, the situation is practically unavoidable because of the country's location, but how one goes about defending that location is a matter of choice and not fate. Under the current scenario, intense combat would take place east of the Rhine with the certain expectation of high levels of destruction. The swift application of tactical nuclear weapons to save failing conventional defenses would only make the situation worse. So why insist on a strategy that so patently represents one of the worst of all choices? The time has surely arrived for both the FRG and its alliance partners to address difficult political questions, to provide the climate and the opportunity to look at viable strategy alternatives that provide both deterrence and warfighting capability at affordable cost and which

do not necessarily involve the planned devastation of the FRG and a prompt nuclear showdown between the two military superpowers. To cling to a concept which requires that war in the Central Region must immediately invoke massive United States nuclear involvement and thereby hope that the potential foe is deterred appears to be a concept needing serious reexamination.

What, then, is a viable defense alternative for NATO? Whatever it is, it should consider some fundamental alliance conditions and elements. First and foremost among these is the acknowledgment of the mutual U.S.-Soviet nuclear impasse on a strategic and tactical plane with an apparent continuing tilt in the Soviet's favor—if not real, then perceived. "Rethinking the Unthinkable," as one author calls an apparent recently renewed acceptance by American strategists of fighting nuclear war, should be questioned as a solution to alliance defense problems.¹⁷ The accident at the Three Mile Island nuclear power plant has probably served to introduce a degree of reality into nuclear discussions in the civil sector and may serve the same purpose in other areas, too. If nuclear weapons are to play a continuing and significantly meaningful role at the tactical level, then questions of escalation, conflict control, and war termination are in need of thorough examination and deserve some very precise answers.

NATO will not do itself a favor when buttressing its defense with a capability that is in a near-checkmate situation and whose employment solicits an unpredictable response.

Second, a recognition that in our free societies it is probably impossible if not counterproductive to attempt to instill or to maintain a near-wartime psychology for any extended period even to support essential military programs. The majority of citizens of NATO countries are surely quite aware of the need for adequate defensive measures.

Many, however, question the constant cry for more defense expenditures; and after contributing more, being told that the money has all been spent, was not enough to start with, and what has been bought with it cannot do the job adequately. The demands in each country on a limited amount of uncommitted disposable income are numerous, and defense is only one of them. Although security is a fundamental need that must indeed be satisfied, it is still only one among many. Therefore, the solution may lie in using that which is available better, and, if necessary, changing strategies, doctrines, and concepts of military force employment—none of which are sacrosanct, to get the job done. The incentive to do so may lie in the continuing Soviet increase in theater nuclear as well as conventional combat power and in the unlikelihood of any really significant and sustained growth in future allied defense budgets. A consoling thought should be that historically ample defense budgets have seldom been accompanied by a corresponding flowering of strategic thought.

Third, the alliance must address and define its warfighting goals over and above deterrence and the rapid employment of tactical nuclear weapons once deterrence has failed. Once conflict is joined, for whatever rational or irrational reason, what is the overall objective, and what are the immediate and intermediate goals of the alliance? Failure of deterrence is considered so remote by many that it contributes to the acceptance of poorly-thought-through warfighting concepts. As one author views the problem, "underlying most of the causes of deficiency in NATO is a fundamental lack of seriousness about the likelihood of war."¹⁸ Subscription to the emotionally satisfying but impractical concept of total victory would make compromise impossible and war termination on other than a total war basis doubtful. However, if the aim of the alliance is to terminate a situation in a manner favorable to itself, that is, stopping the

attacker effectively and putting him on the defensive accompanied by as little damage to home territory as possible, then it is quite possible that a reasonable force structure and disposition can evolve, satisfactory to NATO both in peace and war.

Finally, length of war should be a decidedly secondary consideration for NATO planners. Almost all wars, deliberate or accidental, were to be short wars. For instance, World War I was expected by both sides to be violent but short, "a war lasting three, or at the most, four months . . . a violent, but short storm" stated Bethmann-Hollweg in August of 1914.¹⁹

Length of war is generally indeterminate and governed not by logic and reason but by factors often beyond the control of the combatants. Bernard Brodie states that "the waging of modern war on any scale approximating total national commitment necessitates so huge and unwavering an effort that the first casualty is not so much 'truth' as simple reason."²⁰ The NATO goal then should be to reason *before* not after the unthinkable happens; not to gird itself for a war of short or excessively long duration but rather for one in which supplies and expendables last sufficiently long until there is reasonable expectation of resource replenishment. Neither the Soviets nor the allies have the capability to stock sufficiently in peace so as to take care of all contingencies in war. Essentially, time is NATO's ally, after thirty days that is; at which time the inherent industrial strength of the West should come to bear. Not even in the nuclear age has this factor of sustainability lost its relevance, especially if the nuclear option was not exercised as expected. But what about the first thirty days?

A Suggested Solution

The solution suggested is nothing new, certainly not revolutionary. It is a recommendation to substitute the indirect form of

warfare for the direct approach; the substitution of such principles of war as maneuver, flexibility, surprise, and simplicity for concepts of mass, attrition, complexity, and inflexibility now inherent in our current strategy. In an address to the Führungsakademie der Bundeswehr in November 1978 and again in a recent article in *Parameters*, Lieutenant General Raymond Furlong, USAF, then commander of Air University, described the indirect concept of war fighting that has as its principal goal the mind of the enemy commander rather than the bodies of his troops.²¹ What General Furlong is talking about is the return to a style of warfare which at one time was the American way of fighting—that is, adapting to the situation, building on your own strengths, and exploiting the weaknesses offered by the enemy.

American history is replete with examples where smaller, adaptable, ingeniously led maneuver forces triumphed over the many who did not heed the changes in their environment. Braddock paid dearly during the French and Indian War when he tried to apply Continental wargaming to the American wilderness. At Lexington and Concord the revolutionaries changed their tactics sufficiently to teach the Redcoats a lesson and Washington turned the embers of a dying revolution into a bright flame with his imaginative leadership at Trenton and Princeton. Names such as "Stonewall" Jackson, Lee, Grant, Sherman, Scott, MacArthur, and Patton ring with imagination and tell of success often against difficult odds; they speak of movement, surprise, discipline, skill, and matching forces to the situation.

During the U.S. Civil War, warfighting concepts started to change, almost imperceptibly at first but nevertheless decisively, away from maneuver to the application of mass and attrition warfare, which was in fact adaptive for the North and won the war at less overall cost than would the repeated battles of the 1861-63 variety. An

agricultural South won many brilliant victories in those early years but lost the war when it tried to beat the North at its own game without possessing the necessary prerequisites. Such bravery as that exhibited by Pickett's Charge at Gettysburg, although inspiring, was exactly the kind of attrition the South could stand the least.

By the end of World War I, concepts of mass and attrition war should have been laid to rest on the fields of Flanders and at the forts of Verdun. But not so. Only the defeated Germans looked for and found alternatives,²² not because of the tremendous losses they and their opponents had suffered but because of the restrictions imposed by the Treaty of Versailles. They found their alternatives again, not in new weapons or their massive application but in concepts of maneuver and surprise, taking advantage of the mobility and firepower provided by the tank and aircraft. However, the innovators of the blitzkrieg soon forgot the reasons for their own spectacular successes of 1940 and 1941 and tried to beat the Soviet giant on his own terms. The massive Soviet tank armies, which swept across eastern Germany in 1945, gave ample testimony to who was best at mass and attrition.

U.S. World War II strategy in Europe also followed the principle of mass but with the principle of attrition used only where it would lead to substantial weakening of the enemy. U.S. strategy substituted materiel for human lives and overpowered the adversary with the products of an efficient and ample industrial base. However, strict adherence to rigid employment concepts based on mass is essentially foreign to the American character, which has never taken well to excessive regimentation. Principles of mass employment and the direct approach were adhered to during this period only with difficulty. Foremost among the opponents of such concepts was Patton, whose tactics of swift and decisive penetration were reminiscent of those of Jackson during the Civil

War and proved more often a bane to Eisenhower than an asset. Patton introduced tactical uncertainty into a situation that strategically possessed little of it, but his approach also had the potential for early war termination.

Today, however, the situation is drastically different. Mass is measured in terms of in-being forces not future deliveries, at least during the first thirty days of conflict, and under such conditions the Soviets possess a decided initial advantage. Thus, it seems incongruous to match the potential adversary in areas he is best at and where the vastness of the Atlantic Ocean presents NATO with a significant logistical handicap. The solution to the problem lies not in the total relocation or restructuring of current forces, in new equipment and technology, and ever more detailed command and control; although all of them are important, it lies in using what is available more effectively by building on available strength and the enemy's weakness, as so many successful American military leaders have done in the past.

Specifically, one should accept the idea that the Soviets, if they choose to attack, would achieve a significant degree of surprise in time, place, and method—if such is not the case, all the better. Therefore, the major NATO defensive effort would initially be reactive but not necessarily purely defensive. Adequate delegation of authority would allow commanders to seize ephemeral opportunities and exploit the situation. This may be especially applicable in the employment of air power.

A Soviet breakthrough should not only be expected but in areas encouraged, facilitated, and channeled. Make *them* commit themselves rather than the NATO forces; spread out *their* flanks and by so doing create the nightmare of every armored force commander from Rommel to Patton. Avoid the head-on battle until the time for decision has arrived. The enemy wants to force the decision as soon as possible, as it is in his

interest to do so. Why should one facilitate matters for him? As suggested by another observer of current strategy, our foremost responsibility is to avoid defeat, then gain the initiative, increase our strength relative to the opponent at one's place and time of choice using whatever means are appropriate and available: technology, mass, maneuver, etc.²³ Rundstedt and Guderian did not destroy the Allied armies in the West in 1940; they disorganized them and interfered with the ability of their commanders to make relevant, executable decisions. They controlled the dimension of time²⁴ through maneuver and speed. The campaign was relatively bloodless and accompanied by little destruction to nonmilitary assets, but it destroyed an army's ability to function.

Should NATO not strive for such a model rather than a forward defense, reminiscent of the bloody and senseless practices of World War I? A policy of flexibility rather than rigidity does not constitute abandonment of the German ally but reflects realistic warfighting concepts including a believable deterrent posture. The fate of the powerful German VI Army at Stalingrad in 1942 should be a sobering lesson to all who advocate the rigid defense of territory.²⁵

A posture based on maneuver warfare and truly flexible in response not only shows the adversary that one is ready to fight if necessary but fight in a manner so unpredictable that success of aggression may be too uncertain to consider it as a viable alternative for one's ambitions. Additionally, maneuver offers a posture with the option for a country such as Germany to survive a conflict not totally devastated. The option to resort to means of mass destruction is always there; however, one should not be too ready to resort to it too early. Not only does insistence on early application of tactical nuclear weapons appear implausible as a defensive strategy but it may weaken deterrence because of its lack of relevance to current military and political realities.

Obvious advantages to a truly flexible and responsive approach with a decreased emphasis on tactical nuclear weapons are that NATO reserves and capabilities in general, which are now expended at the "knife's edge," are given the opportunity to be brought to bear more effectively. For example, the fact that most Belgian and Dutch forces are not now in place in their forward positions is a plus rather than a minus. No one really knows how they would get there anyway if they had to, across roads choked with refugees all going in the opposite direction. Under a maneuver strategy these forces can form the nucleus of a powerful northern strike force which hopefully could strike the enemy in a coherent and decisive manner. Under a maneuver concept, the U.S. Seventh Army no longer finds itself in the wrong place but rather in the preferred position—on the enemy flank. Not only does the Seventh tie down substantial enemy forces across from it but it poses such a threat to the flanks of enemy operations north of it that it threatens their very success. The German road and rail net, which runs essentially north and south, not east and west, in no small measure facilitates a concept of maneuver aimed at the enemy's flanks rather than static defense predicated on successive westward retrenchment. A truly flexible allied strategy based on maneuver warfare, not on holding territory *per se*, should be able to strain the highly centralized Soviet command and control to the very breaking point. The Soviets are often given credit for blitzkrieg concepts and capabilities when in fact they are neither organized nor equipped to wage such a war; a concept that presupposes decentralization of the decision-making process and delegation of authority to relatively low levels of command. Mobility and detail of plan are not blitzkrieg hallmarks, but rather maneuverability and flexibility of command and its execution.²⁶ Allied maneuver strategy would introduce that vital degree of uncer-

tainty of success which is precisely what is needed for any strategy that has deterrence as its primary objective.²⁷

I remind the reader that Israel, which has little space to speak of and whose command structure must operate within the smallest limits of warning time, has never elected the option of forward defense. A small experiment with such an approach was the establishment of a forward defensive line along the Suez Canal. It proved to be an unwise decision and in 1973 provided neither warning nor defense. Finally, heavy Soviet commitments in the northern or southern NATO regions are of little relevance to Soviet success in the Central Region. Such Soviet force commitment could only degrade their position rather than improve it and result in a division of their forces which would make them too weak to achieve any kind of desirable outcome in the vital and critical central sector. The northern and southern regions are important but not crucial to the outcome of war. That dubious distinction, unfortunately, is reserved, as it has been in times past, for the Central Region. For example, in a still definitive study of German operations in the Northern Theater a respected researcher and historian concluded that:

In warfare there are occasional blind alleys, and for Germany in World War II the Northern Theater was one of those . . . Norway, which a reinforced corps had conquered, took an army plus vast expenditures of materiel to defend . . . the causes of Germany's failure in World War II are not to be found in the specifics of strategy or tactics . . . but in the fallacy of attempting to satisfy boundless ambitions with limited means.²⁸

Although Soviet resources are vast, they are not limitless; Soviets have no options to fritter away what they have in secondary theaters of operation. It is, of course, their choice to do so but ours to respond according to priorities.

ONCE the decision has been made to use available NATO resources in a true manner of flexible response or maneuver warfare, then they look much more formidable to the task and a higher degree of force adequacy is achieved. In fact, the forces available give the option of covering the border lightly and forming powerful air and ground strike forces, which can not only hinder but destroy an enemy's best laid attack plans. Air power, a vital component of NATO striking power, no longer need be viewed as expendable flying artillery to stop hordes of tanks that have overrun an inadequate forward defense. Instead, it can go out and seek its targets ahead and behind the main battles, in the enemy's flanks or wherever he is weak and vulnerable.

Without fuel and ammunition, large mechanized forces soon become liabilities and hostages rather than combat assets. TACAIR can contribute to and bring about that situation by concentrating on those vital Warsaw Pact support elements which carry those combat sustaining consumables. Like the Junkers Ju 87 Stuka in days gone by, TACAIR must contribute to chaos and confusion, to disorganization and fear. It may be that bringing about those conditions is more important than a large tally of tank kills. No longer need TACAIR be the vanguard of Pickett's futile charge by expending itself against the strongest armored formations the enemy can field, but it can lead a charge into the rear and flanks of the enemy, where he is the weakest; into the mind of the enemy commander, depriving him of not only command but of that essential control over his fighting elements. Therein may lie its greatest contribution to the overall defense effort.

Maneuver warfare provides army commanders the option to employ their resources most advantageously within existing space and time constraints. Forces which once were too weak to hold on to every

square foot of NATO territory are now transformed into powerful strike elements with the potential of turning a well-planned Warsaw Pact attack into a chaotic collapse. The ability to roll with the punches and to counter-punch and attack as the opportunity presents itself is not only fundamental to the sport of boxing but to survival on the field of battle. I would suggest that in war one should not be too eager to seek head-on combat like a knight going on a crusade seeking the infidels, but rather look toward ending a conflict—a goal which is achieved by depriving the enemy commander of either his forces or his ability to control them. It appears the wiser of the two courses is to deprive him of the ability to control, and that is the lesson of the German campaign of 1940.

Forward defense as now practiced is a strategy incompatible with true flexibility of

response. NATO forces will never be sufficient to indulge in the extravagance of attrition warfare. However, if the forces available are used prudently, then enough space, time, and resources are available to do a creditable job; and it does not require that one commit joint suicide along with the aggressor by too hastily applying the nuclear option.

However, if we continue to tell ourselves, our people, soldiers, and airmen, that we are second rate, that we cannot do the job, and that the only answer is more men and weapons, maybe after a while people and soldiers alike will believe. Then, in fact, we *will* have a second-rate armed force regardless of Leopards, Eagles, and Tornados. The answer lies in our hearts and minds, not in the swords we carry. Defense without relevant strategy is an impossible task.

Washington, D.C.

Notes

1. An example of this position is the report of Senators Sam Nunn and Dewey F. Bartlett, *NATO and the New Soviet Threat* (Washington: U.S. Government Printing Office, 24 January 1977).

2. Major General John K. Singlaub, "Military Strength Has Declined to Put U.S. at a Disadvantage in Europe and the Far East," *Atlanta Journal and Constitution*, May 6, 1978, p. C1.

3. For an excellent discussion on the principles of war, their origin and efficacy, see John M. Collins, *Grand Strategy: Principles and Practices*, 1973, pp. 22-28.

4. "The viability of current NATO force posture in Europe and perhaps even NATO's strategy of flexible response and forward defense is questionable," Nunn and Bartlett, p. 1.

5. *The Military Balance 1978-1979* (London, England: International Institute for Strategic Studies, 1978), pp. 108-13. For footnotes accompanying listed data see source document. Also see *The Military Balance 1979-1980*, pp. 108-13.

6. R. E. Dupuy and T. N. Dupuy, *The Encyclopedia of Military History*, revised (New York: Harper and Row, 1977), p. 1057.

7. Allied combat doctrine is reflected in allied tactical publications (ATPs). Nearly 30 ATPs have to date been agreed on and published. ATP 35, *Land Force Tactical Doctrine*, April 1977, pp. 5-1 to 5-3, for example, explains tactical nuclear operations as well as the strategy of flexible response, MC 14/3. Essentially it states that if deterrence fails, NATO requires a full spectrum of conventional and nuclear capabilities to be able to defeat the enemy at the level he chooses to fight or escalate the conflict to a level which will either induce an aggressor to cease his attack and withdraw or generate a general nuclear response.

8. MC 14/2, massive retaliation, was intended as a strategy to meet any Soviet attack against NATO with a massive nuclear counterblow. It was a credible strategy at a time when the United States enjoyed a

decided advantage in nuclear weapons and delivery vehicles over the U.S.S.R. and when its will to employ them, if necessary, was not questioned.

9. The reported or anticipated future deployment of the SS-20, SS-21, SS-22, and SS-23 short-to-intermediate-range missiles as well as that of the nuclear-capable Backfire swing-wing bomber suggests that Soviet ability to match NATO TNW employment has been achieved or is well on its way. See "NATO Warned of Soviet Upset in Nuclear Balance," *Philadelphia Inquirer*, May 16, 1979, p. 11; also "Soviet Weapon Scares Europe," *San Francisco Examiner and Chronicle*, May 6, 1979, p. 4B; "Soviet Buildup Worries NATO," *International Herald Tribune*, May 16, 1979, p. 1.

10. Colin S. Gray, *Defending NATO-Europe*, a report prepared for the Director, Defense Nuclear Agency, Washington, D.C., November 1977, p. 15.

11. For a discussion of forward defense and its essentiality to a successful NATO defense posture, see Colin S. Gray, pp. 8-19. Mr. Gray offers eight reasons why he thinks forward defense is a must.

12. Edward N. Luttwak, "The American Style of Warfare and the Military Balance," *Survival*, March/April 1979, p. 57.

13. The Belgian defense line was anchored on powerful Fort Eben Emael, guarding the Albert Canal. It was captured in a daring airborne assault on the first day of the German invasion.

14. Michael I. Handel, *Perception, Deception and Surprise: The Case of the Yom Kippur War* (Jerusalem: The Hebrew University, 1976). Dr. Handel states, "there is little chance, despite the availability of adequate information, ultra-sophisticated technologies, and all human effort invested, to prevent or forestall an impending surprise attack. Very few surprise attacks on the strategic level have ever failed." Also, see Dr. Barton Whaley, "Deception and Surprise, The Lessons from History," a briefing to the Joint Staff, as reprinted in

Readings in Military Employment, vol. III, part II, Maxwell AFB, Alabama, Air Command and Staff College, February 1973, pp. 145-58.

15. The NATO triad consists of conventional, theater nuclear, and strategic nuclear forces. This is contrasted to the U.S. strategic nuclear triad of land- and sea-based ICBMs and long-range bombers.

16. *NATO and Its Future: A German-American Roundtable*, Co-sponsored by the Konrad-Adenauer-Stiftung and the Institute for Foreign Policy Analysis, Washington, D.C., 14-16 November 1977, p. 10.

17. Leon V. Sigal, "Rethinking the Unthinkable," *Foreign Policy*, Spring 1979, pp. 35-51.

18. Colin S. Gray, "NATO Strategy and the Neutron Bomb," *Policy Review*, Winter 1979, p. 7. Mr. Gray addresses, among other things, the apparent inability of politicians to think beyond peacetime deterrence. Also see Charles M. Kupperman, "The Soviet World View," *Policy Review*, Winter 1979, p. 45, who comments on the lack of seriousness of Western planners.

19. Fritz Fischer, *Germany's Aims in the First World War* (London: Chatto and Windus, 1967), p. 92.

20. Bernard Brodie, *War and Politics*, 1973, as reprinted in U.S. Army War College *Selected Readings*, vol. I, Carlisle Barracks, Pennsylvania, 1977, p. 64.

21. Lieutenant General Raymond B. Furlong, "Strategymaking for the 1980's," *Parameters*, March 1979, pp. 9-16.

22. Mitchell, Fuller, Douhet, de Gaulle, and others looked for alternatives to static attrition warfare. None of them, however, were suc-

cessful in the interwar period of having their ideas accepted and implemented in the military services of their respective countries. The Germans borrowed many ideas from these men and integrated or adapted them to their new form of maneuver warfare—*blitzkrieg*.

23. Furlong, pp. 12-13.

24. "New Strategic Concept," *National Review*, October 27, 1978.

25. The Soviet counterattack in November 1942 swiftly broke through Rumanian and Italian forces that flanked the German VI Army fighting for Stalingrad. The powerful Russian pincers quickly surrounded the Germans and successfully fought off inadequate German relief efforts. The subsequent demise of the VI Army was less due to the initial debacle and the severity of the Russian winter than to Hitler's direct order to its commander, General Paulus, to hold in place and recapture lost ground. The German commander stoically awaited Hitler's authorization to break out of the encirclement, which never came.

26. For a discussion of Soviet combat doctrine and practice, see V. Ye. Savkin, *The Basic Principles of Operational Art and Tactics*, Moscow, 1972, and A. A. Sidorenko, *The Offensive*, Moscow, 1970, published and translated in the United States under the auspices of the USAF.

27. Conversely, a major objection by Western planners to such an approach is precisely its high degree of uncertainty induced by the many variables which can affect the outcome.

28. Earl F. Ziemke, *The German Northern Theater of Operations 1940-1945* (Washington, D.C.: Department of the Army, 1959), p. 315.

coming. . .

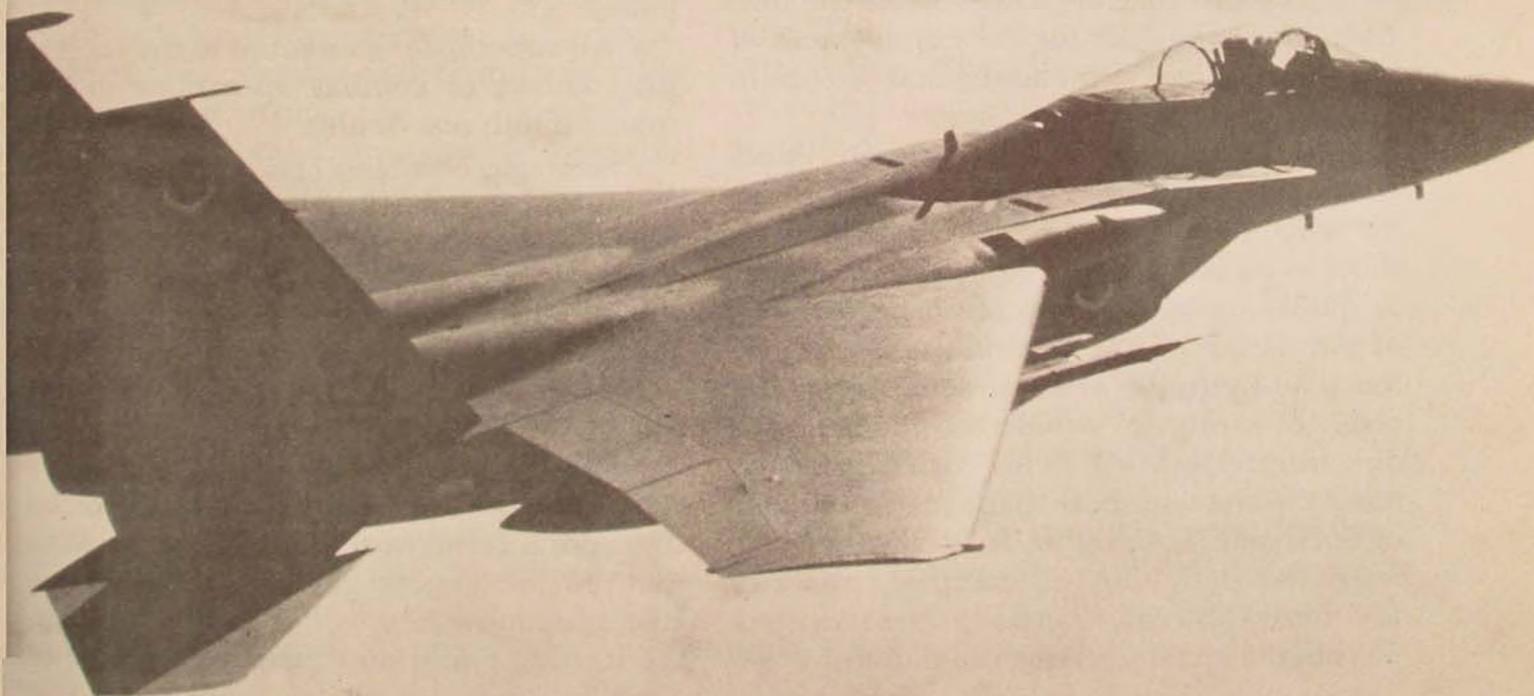
in our May-June issue:

- Challenges and Uncertainty:
NATO's Southern Flank
 - Clausewitz Reconsidered
 - The Scorpion Story
 - Ethnic Minorities in the
Soviet Military
-

*"... most research
and development
results from requirements
generated by doctrine."*

SOME THOUGHTS ON AIR FORCE DOCTRINE

MAJOR ROBERT C. EHRHART



HAVE you read the latest version of AFM 1-1, *Functions and Basic Doctrine of the United States Air Force*, published in February 1979? Have you ever held a discussion with other Air Force members about Air Force doctrine? Could you explain to your Soviet or NATO counterpart the purpose of doctrine or, more specifically, the essence of Air Force doctrine? If your answer to any of these questions was, at best, a hesitant "Well, maybe," I would suggest that a closer look at Air Force doctrine is in order.

A fundamental problem with Air Force doctrine is the absence of any real consensus as to what doctrine is and just what it is supposed to do. We want doctrine to reveal not only the capabilities of air forces but also to offer guidance on how best to use these capabilities. We demand that doctrine be both enduring and flexible, that it be valid over time yet responsive to change. We look to doctrine to provide guidance to Air Force personnel, while insisting that it remain open to interpretation. We want it to provide direction, yet not be too restrictive in its direction. We expect doctrine to guide research and development while at the same time it adjusts to technological innovations. And we insist that doctrine set out the fundamental principles for the employment of air forces, while demanding that it remain subordinate to national policy.

By trying to stretch a single term, "doctrine," to accommodate all things, we wind up with an amorphous concept that falls short in all areas. This criticism is not merely quibbling with semantics: The inability of Air Force people to understand the essence and purpose of doctrine is largely the result of trying to include too much under one umbrella word. This article offers a more limited and more manageable concept of doctrine. In doing so, it suggests a more restricted definition of doctrine, analyzes the derivation of doctrine, and suggests ways to make our doctrine more useful.

What Air Force Doctrine Should Be

Air Force doctrine is the body of enduring principles, the general truths and accepted assumptions, which provide guidance and a sense of direction on the most effective way to develop, deploy, and employ air power. It should not encompass either political influences or specific instructions on the execution of these principles.

Air Force doctrine actually includes two groups of fundamental assumptions. The first consists of the principles of war, the axioms that have proved over time to apply in one way or another to all types of warfare. They include such concepts as mass, surprise, concentration of effort, and security.

The second group of principles that comprise Air Force doctrine consists of those which, derived largely from the demonstrated and often unique capabilities and qualities of air forces, specifically refer to the best ways to develop, organize, and employ air forces as opposed to ground or naval forces. Just what these principles are is a matter of some dispute even within the Air Force. The following are examples of axioms that are generally considered to constitute fundamental assumptions about air power:

- Air superiority is essential to the successful conduct of combat operations in any sphere (land, sea, or air).
- Strategic bombing can bring about the defeat of the enemy by destroying his capability to wage war.
- Air forces can best be employed offensively.
- Air forces can best be employed according to the principles of unity of command and decentralization of control.

Of what use is doctrine? Doctrine offers a conceptual framework and way of thinking that provides general guidance to use in specific situations. It provides the foundation, the starting point, on which every aspect of

the Air Force should be based, including force structure, strategy and tactics, training, and functional procedures. Even the roles and missions of the Air Force, currently established by such administrative arrangements as the Key West and Newport Agreements of 1948 and 1949 and DOD 5100.1, should be derived from doctrine rather than through bureaucratic compromise.

Doctrine also provides guidance for establishing priorities for the employment and development of air forces. For example, one of the principles of air power is that air superiority is a prerequisite for the successful conduct of other missions. The necessity to achieve air superiority dictates the need for an air superiority fighter, which in turn has ramifications on both the development and acquisition processes. Obviously, the establishment of priorities is especially important when financial resources are limited.

Similarly, doctrine acts as a sounding board, as a frame of reference for testing, evaluating, and employing not only new concepts but also new technological developments and new policies. If, for example, we accept the idea of unity of command as a fundamental principle for the organization and employment of air forces, one way to evaluate a new suggestion for the restructuring of our forces is to determine whether it increases or reduces unity of command.

In a broad sense, doctrine provides the rationale behind both the organization and employment of air forces. It explains what air forces are capable and incapable of doing and why they should be structured and used in certain ways. In doing so, it provides only general guidance. Doctrine is a compass, not a road map. It gives us the general heading, but it does not give us detailed instructions on how to get there. It provides direction but not the details of how to meet the demands of a particular situation.

Of those elements we now try to include in the omnibus term "doctrine," how many

qualify for inclusion within this more restricted definition? Very few. What we currently refer to as "doctrine" contains not only the principles of air power (real doctrine) but also two other related, but nevertheless separate, elements. The first group falls under the category of "political guidance"; the second may be classified as "how-to directives" or "procedures."

doctrine and national policy

The first of these external elements does, in fact, affect every aspect of the Air Force and in a very definite sense guides those responsible for its activities. Political guidance arises out of national policy (the political framework within which the military services operate) and national objectives (the purposes for which our forces are deployed and, if necessary, employed).

Certainly, the military services need to understand and accept these policies and objectives. We should not, however, cloud the issue by referring to these potentially changing political positions as doctrine. Inherent in the concept of "fundamental principles" is the idea that they are fairly stable, enduring rather than transient, and capable of providing guidance for more than a short time. The idea that these truths will change with every political decision contradicts the view that doctrine establishes stable and guiding principles.

The basic truths that constitute air doctrine describe the best way in which to prepare and employ air forces. Whether or not these fundamental principles are adhered to and policies, objectives, and missions established accordingly, they still exist. At the same time, to argue that there are fundamental principles that underlie air forces is *not* to advocate that these principles are the sole guide for those involved in the decision-making processes. Since military forces exist—or should exist—only to serve political ends, those responsible for such forces must

recognize and ultimately be guided by political considerations.

Are we, then, justified in separating doctrine from national policy? We are, for several reasons. Because the external factors, including political considerations, that influence the preparation and use of air forces are subject to change, those responsible for the Air Force should have a frame of reference or a standard to guide them. They should be aware of the best way to organize and employ air forces, since the politically acceptable way may change and conditions may at some time permit a shift closer to this best way. Moreover, the frame of reference doctrine provides can help to determine how far from the optimum method we can drift and still have a feasible course of action.

In addition, the National Command Authorities are responsible for the ultimate decisions regarding all American military forces. To make correct decisions, they need to be aware of the capabilities and limitations of these forces. By referring honestly to doctrine, Air Force leaders can say to the government, "We will try to do what you ask of us, but you should be aware that this is not the most efficient or effective way to organize and employ air power. We could be much more effective if we were allowed to operate according to these principles." It is the prerogative of the civilian leadership to overrule this advice, and there may be good reasons for doing so. This does not, however, obviate the need to proffer such counsel.

doctrine and procedures

One characteristic of our current approach to Air Force doctrine is an effort to make doctrine "do something," to "give it teeth." Consequently, there is an increasing tendency among those responsible for doctrine to include in it specific directions on how to implement the fundamental principles that

form the basis of air power. These how-to directives, while based in part on the principles of air power, are not themselves doctrine. They are directives for the organization, training, support, and employment of air forces. They are procedures rather than principles; that is, they tell how to do something. These elements also direct what steps must be taken by whom to implement the fundamental guiding principles.

It is difficult to determine exactly where principles end and procedures begin. In a general sense, that which refers to what air forces can do constitutes doctrine; that which directs how to carry out these principles, how to implement the general guidance, is procedural. Put another way, what we can do with air power remains relatively fixed; precisely how we are to do it changes more frequently. The principles for the employment of air forces in a limited war might include such considerations as the gaining of air superiority, effective close support for ground forces, and a unified command structure for all forces employed. The manner in which these considerations are put into practice would fall within the realm of procedures.

Why should we not consider these procedures a part of doctrine? Primarily because they lack the time-enduring quality, the aspect of general truth, that is the hallmark of doctrine. They are not only guided by doctrinal principles; they are also affected by more transitory political and technological considerations.

These procedural directives are essential to the effective operation and organization of the Air Force. If there were no way to translate principles into practice, doctrine would be of little value. To include these under the rubric of doctrine, however, is to confuse the issue. To understand the interrelationship of these three elements—principles, procedures, and political policy—we need to keep in mind that the fundamental principles which make up doctrine are those

that tend to persist over time, while the methods of applying them may change, as may the political considerations that may override the "best way" guidance doctrine offers.

The Sources of Doctrine

What are the bases for the accepted assumptions that comprise doctrine? Doctrine evolves from three sources: theory, technology, and historical experience.

theory

Theory, without the leavening of experience, lacks substance and foundation; experience, without theory, does not permit us to take adequate account of the change that will surely come.¹

Our Air Force and the concept of air power were born in the minds of theorists, of visionaries who believed that past experience was not applicable to warfare waged in the new dimension of the air. These men looked beyond the here and now and refused to allow their vision to be limited by the constraints of their day. When Douhet, Mitchell, Trenchard, and their associates began to preach their theories of air power and to develop a supporting doctrine, they did so not on the basis of what air power had done in World War I but on their interpretation of what air power could do if properly developed and employed.

Obviously, air forces today owe a great deal to these men. They provided a rationale for the existence of air forces and gave a sense of direction to the more pragmatic processes of organizing, controlling, and employing air forces. They encouraged military aviators to look into the future and set their sights beyond the confines of the moment. We still need individuals with this frame of mind, this sense of tomorrow. Without continued efforts to envision the future, military forces would be forever

trapped in the past and the present, ready to fight the last war but totally unprepared for the next one.

Yet there are serious problems with basing doctrine too completely on theory. The guidance that doctrine should provide must enable us to fight the war of today as well as point us in the proper direction to prepare for the war of tomorrow. Doctrine consists of general principles; but if these principles are to be of value, they must be capable of being put into effect. A doctrine founded primarily on vision runs the risk of being irrelevant, even dangerous, if technology has not caught up with it by the time that next war breaks out.

Had America's national leaders been contemplating war in the 1920s and 1930s, a significant part of the doctrine Mitchell and others in and out of the Army Air Corps espoused would have been worse than useless as a guide to action because the state of the art rendered impossible many of their claims for air power. While far-reaching conceptual thinking is a necessary element of the doctrinal process, theory is, after all, hypothetical. Doctrine must be grounded in something more substantial than vision alone.

technology

Despite the impact of new weapons, the predominant characteristics of air forces have changed only in degree.

General Thomas D. White

To determine the exact relationship between technology and doctrine is a little like trying to answer the riddle: which came first, the chicken or the egg? One of the criticisms leveled against the air power theorists of the 1920s and 1930s is the charge that much of their doctrine was too far ahead of technology. On the other hand, to carry this criticism to its logical conclusions—that technology alone determines doc-

trine and that doctrine will change with each technological development—negates the idea of elementary truths which remain valid over time.

In one sense, doctrine must lead technology. Those responsible for research and development should use these fundamental principles as guidelines for the development of new weapon systems for better—and, if necessary, different—ways to put these principles into effect. The recognition of the need to attain air superiority to conduct either air or ground operations in the combat zones was certainly one of the driving factors behind the development of the F-15. Such a situation reflects one side of the relationship of doctrine and technology; most research and development results from requirements generated by doctrine.

Nevertheless, not all technological developments are the result of specific requirements levied by doctrinal demands. Technological developments do occur independently of specific military guidance. (The development of nuclear bombs, for example, stemmed initially from experiments and pressures by “pure scientists,” not military sources.) In this case, an understanding of the principles of air power can provide a broad perspective for evaluating the possible utility and potential effectiveness of new or improved systems.

Finally, there may be times when a technological breakthrough forces a change in doctrine or even the establishment of new doctrine. The invention and subsequent development of aeronautical devices are a case in point. By extending warfare into a third dimension, the airplane forced military theorists (and doers) to derive from experience, the principles of war, and the characteristics of this new technology, a doctrine that would guide the effective employment of the new weapon.

Achieving the proper balance between doctrine and technology is not easy, and there are pitfalls on both sides of the cen-

ter line. Adherence to a given doctrine may have a positive effect on technological progress. The doctrine of strategic bombing, for instance, which dominated the Army Air Corps in the interwar period, helped push the research and development of the B-17 and B-29. Conversely, the commitment of the Luftwaffe to blitzkrieg warfare worked to prevent the development of strategic bombers, the absence of which proved crucial in the Battle of Britain and in the invasion of the Soviet Union.

Here, as with so many aspects of doctrine, there are no pat answers. If a service uses a static doctrine as the sole basis for the evaluation or development of new systems, “new” might well come to mean no more than “improved” rather than “different.” Conceptual thought and research and development will then have difficulty breaking out of established patterns.²

The French reliance on a defensive doctrine after World War I prevented senior army officers from understanding the advantages of employing tanks in mass rather than parceling them out among infantry units. Conversely, the German Army, not hampered by a commitment to the defensive and forced to search for alternatives to sheer mass, was more receptive to new ideas. The results of doctrinal closed-mindedness versus conceptual receptiveness were conclusively demonstrated in the summer of 1940.

On the other hand, to assume doctrinal changes with each new weapon development is to run the risk of too hastily discarding doctrine or ignoring parts of it each time a new system appears. The result would be a lack of stability and guidance. In the employment of air forces, it would seem that technological developments will impact more on procedures than on doctrine, more on the method of implementation than on the principles themselves. For example, the unsuccessful Schweinfurt raids of 1943 did not in themselves demonstrate

the ability or inability of strategic bombing to destroy the enemy's warmaking capabilities. They did, however, disprove the idea that unescorted bombers could always get through with acceptable losses. The result was a change in procedure that involved the P-51 as a long-range escort. Doctrine (the idea of strategic bombing to defeat the enemy) remained unchanged, but procedures (the method of execution of strategic bombing attacks) adjusted to the current state of the art.

In trying to assess the relationship of technology and doctrine, we should begin by determining where new developments might fit into accepted doctrine; then, if necessary, we should adjust doctrine accordingly. At the same time, in allowing doctrine to guide not only the employment of existing systems but also the development of new ones, we must guard against becoming so rigid that we allow either doctrine or the manner in which we implement it to ossify into dogma.

historical experience

Military doctrine must provide distinct guidelines, drawn from both foresight and experience, for the conduct of future operations.

General Thomas D. White

What of the argument that doctrine should be drawn from past experience? Of what value is the past in determining doctrine for modern war?

To be valid, the fundamental assumptions that comprise doctrine must be grounded in experience. Without an awareness of what air power has done—and has not been able to do—doctrine would have to be derived solely from hypotheses, from educated guesses about the capabilities of air forces. Past experience provides the substance for doctrine. It supplies the “proof” on which to base fundamental assumptions as well as educated guesses. Experience

makes doctrine practical rather than merely theoretical.

Certainly, too slavish a devotion to the past can lead to antiquated doctrine. In the years after the Franco-Prussian War, the French military theorists, seeking a way to reverse that ignominious defeat, looked all the way back to the Roman Republic and Empire. Interpreting victory in this earlier period as the result of courage and élan coupled with a reliance on offensive action, French theorists derived the doctrine of the *offensive à outrance*, a fanatical commitment to an offensive relying on mass and superior morale. Wedded to this doctrine and thus paying insufficient attention to the technological developments in the century following Waterloo, the French Army marched off to war in 1914 with fixed bayonets, legions of cavalry, and relatively few machine guns. The result was near-defeat in the opening weeks of the war and the decimation of the French male population over the next four years.

Such an example, however, is not an argument for ignoring the past. Rather, it suggests the need to approach the past with a sense of objectivity and a clear awareness of the changed conditions of the present. To derive the proper principles on which to base the development and employment of air forces, the evaluation of past experience must be detailed, objective, and committed to an understanding of what really happened and why. Doctrine must be based on a critical analysis of what air power did and did not do in specific situations rather than on institutional shibboleths, widely accepted but not really proved.

What to Do with Doctrine

The best doctrine is worthless if it is not well-known and believed.

Major General Dale O. Smith

To be of value, doctrine must meet three

criteria: it must be understood; it must be valid; and it must be translated into action. How can we make doctrine meet these criteria?

understanding doctrine

It is virtually impossible to assign priorities to these three requirements for useful doctrine; each is critical. Nevertheless, the first step toward understanding doctrine is to determine just what it is and what it does. As I have suggested, our current use of the term "doctrine" is too inclusive. Rather than providing guidance and rationale, this conglomeration of concepts, principles, practices, and policies confuses, then exasperates, and finally drives Air Force people to ignore doctrine. I have suggested that we reserve the term "doctrine" for the fundamental principles that underlie the development and use of air forces. Even accepting this approach, however, does not solve the problem; we must still agree on just what these fundamental principles are.

Having once determined the fundamental principles which constitute doctrine, we need to get the word out to the Air Force. This does not mean merely putting out a pamphlet or manual and suggesting that everyone read it. Reading is not understanding. Doctrine, as well as the procedures that are derived from it, needs to be studied, analyzed, and debated.

The Air Force must put more emphasis on doctrine. It should be, after all, the foundation for everything the Air Force does; and every member should be aware of the basis of the profession to which he or she belongs. An introduction to doctrine should begin on entry into the Air Force, and careful study of Air Force doctrine should be a significant portion of every professional military education (PME) curriculum. This instruction should delve into such questions as: Where did these principles come from? How have they been proved in the past? What makes them still applicable

in the present and in the future? How are they to be put into action? How might they be affected by technological, political, and economic conditions? How do joint and combined operations affect the implementation of these principles?

We should give greater attention to stimulating debate on doctrine. The limited number of articles on this subject in Air Force journals, especially from officers in the field, is indicative of the level of current interest in doctrine. One way to stimulate this interest would be to inform people as to how doctrine is formulated and implemented and then to tap resources outside the Air Staff for assistance. Another would be to encourage informal (and voluntary) professional study groups throughout the Air Force, perhaps with recent PME graduates forming the core of such informal meetings. We might even consider an "Air Force Now" on doctrine.

validating doctrine

Doctrine must be valid, sound, and well-grounded. It must, in short, be true. One important way to assure that the principles which comprise our doctrine are correct is to base them on an objective analysis of a broad range of historical experience. Only by such an evaluation can we identify elements or conditions unique to specific wars and thus separate enduring principles from temporary procedures.

To improve the firmness of our historical base, we need to establish a stronger link between those responsible for the development and implementation of doctrine and those agencies within the Air Force involved in historical research. This would provide a clearer, more specific, more pragmatic focus for the Air Force historical community and would result in valuable assessments for those responsible for doctrine. In addition to having better access to work already available, those who develop and imple-

ment doctrine could provide guidance to historians on topics the analysis of which would aid doctrinal development.

In using history as a basis for validating and implementing our doctrine, we must be wary of the pitfalls of a too facile acceptance of parallels and lessons from the past. History rarely, if ever, provides clear-cut lessons that can be lifted out of whole cloth from one era and applied to another. Rather, it offers a feel for the types of approaches that have or have not worked in similar situations. Those who would seek to use history must approach the task with the understanding that what the past provides are guidelines, general trends, and suggestions on how to approach the present and future.

History "ought to tell how changes happen, what are the likely developments today and tomorrow, what 'patterns' are likely to be repeated . . . or can be made to repeat themselves with changed colors or in some new shape."³ Such an approach entails not a blind adherence to the past but an intelligent and judicious analysis of the guidelines offered by past events, coupled with an imaginative evaluation which tries to extrapolate these suggestions to the particular conditions of the present and foreseeable future. If nothing else, history can show us what questions to ask—of theory, technological developments, trends, and new possibilities.⁴

Both doctrine and the implementation of doctrine are dependent on history. The broad perspective that history can provide enables the astute observer to differentiate more clearly between the fundamental principles and the more transitory methods for putting them into effect. The analytical approach to history leads to a more complete and accurate understanding of both principles and procedures, while the application of imagination—the ability to take suggestions from the past and apply them to the present and future—lies at the heart of the successful implementation of these principles.

Validity, however, stems from more than past experience alone. Since doctrine must be a synthesis of experience, technological developments, and hypotheses, we can maintain its applicability only by a constant reassessment of each of these factors. Only thus can we ensure that our doctrine—and the procedures by which we implement it—does not degenerate into antiquated dogma.

implementing doctrine

A doctrine that is not used is worthless. If we wish the principles comprising doctrine to be of more than academic interest, we must translate into action. We must convert the general guidance that doctrine provides into specific directives.

To accomplish this demands a great deal from those charged with the task. They must possess a firm grasp of the principles of air power, an awareness of man's historical experience with military—especially air—forces, an understanding of current and projected technological developments and trends, a knowledge of national policy, and, finally, the ability to synthesize all of these elements into something that works. In addition, the Air Force must provide centralized direction for this implementation process to assure that these procedures, in fact, stem from our doctrinal principles and that they agree with each other where applicable.

In implementing our doctrine, we must avoid the temptation to focus our attention too closely on the type of war we anticipate and are most capable of fighting and to ignore those types in which we do not expect to become involved. The desire not to engage in another Vietnam, for example, is not sufficient insurance that we will not do so. To ignore that experience and neglect to reanalyze doctrine and the implementation of doctrine accordingly would be tragic and very dangerous. Our doctrine and the procedures for implementing it must prepare us for a full spectrum of conflict.

Moreover, the procedures developed to implement doctrine must take into account the joint or combined nature of most military operations in which the Air Force might be involved. We must avoid the tendency to establish procedures for the development and employment of our air forces as if they will exist and operate in a vacuum. Air Force procedures must be specific and emphatic on the joint nature of military operations and on the relationship of air forces to other elements of the American military establishment and to the military forces of our allies.

Finally, we must rid ourselves of the notion that air power can do anything and everything. Accepting the premise that "the inherent flexibility of air power is its greatest asset"⁵ must not blind us to the realization that air power does have limits. One of the problems with the American military has been the tendency of services to adopt or accept missions and roles to justify their existence or increase their portion of the de-

fense budget rather than because a particular service is inherently best suited to perform that mission. To the extent that any of the services engage in such politicking, we do ourselves, the National Command Authorities, and the American people a disservice.

ACCORDING to the "Doctrine Development Initiative" written by what was then the Doctrine Development Branch of Headquarters USAF (AF/XOCDD), the general problem with Air Force doctrine is that "there are simply no 'handles' on doctrine."⁶ One way to provide such handles is to identify more precisely both the content and purpose of doctrine. Only if the development and employment of our forces are grounded firmly in a doctrine understood and used by professional airmen can the Air Force properly help to provide the best possible defense for the United States.

*Department of History
United States Air Force Academy*

Notes

1. "Perspectives on Basic Air Force Doctrine" (undated paper in AF/XOCDD file entitled "AFM 1-1 Briefing Material"), p. 3.

2. In a paper presented at the USAF Academy's Eighth Military History Symposium, Robert Perry suggests that too often a psychological commitment to "improvements" rather than "new departures" has hampered Air Force Research and Development efforts. Robert Perry, "Technology, Doctrine, and Military Requirements," in *Air Power and Warfare* (Washington, D.C.: Government Printing Office, 1979), pp. 386-400.

3. Thomas H. Wintringham and John Blashford-Snell, *Weapons*

and *Tactics* (Baltimore: Penguin Books, 1973), p. 17.

4. In a recent Harmon Lecture, Philip A. Crowl offered a lucid argument on the value of history as a guide to asking the right questions. "The Strategist's Short Catechism: Six Questions without Answers," Twentieth Harmon Memorial Lecture (USAF Academy, Colorado, 1978).

5. U.S. Army Field Manual 100-20, *Command and Employment of Air Power*, 1943.

6. "Concept for Reasoned Change in Air Force Doctrine," AF/XOCDD (Washington, D.C.: Headquarters USAF, 4 July 1977), p. 2.



IN the history of the development of air power, the decade of the 1930s was one of the most important—perhaps *the* most important. The doctrines, tactics, and the technological revolution all presaged what was to come in the Second World War. Yet this decade has not received the attention it deserves. Historians have either approached it without the technical or military background to discuss the issues in depth, or they have examined the history of the period from a narrow, doctrinal point of view.¹ Comparing and contrasting the develop-

ment of air power in Britain and Germany in the 1930s in terms of contemporary capabilities and national strategy should help draw the subject into focus and give one insight into the real potential of air power in the late '30s and a better understanding of its development during World War II.



BRITISH AND GERMAN AIR DOCTRINE BETWEEN THE WARS

DR. WILLIAMSON MURRAY

First, though, one must define air power. Unfortunately for the development of a coherent theory of air warfare both in this country and in Great Britain, there has been a tendency to define air power within narrow, circumscribed limits. From the dawn of aviation, air power advocates have all too often tied air power directly to the concept of strategic bombing to the exclusion of all its other possible roles. In reality, of course, air forces have had to perform a number of diverse and important tasks other than strategic bombing. In fact, the real contribution of air power to final victory in the Second World War lay in the very diversity of its capability rather than in one particular mode of operation.²

The fact that Italian thinker Giulio Douhet is still regarded as one of the chief prophets of air power is a revealing comment on the basic confusion between theory and reality in air doctrine. Disregarding the interservice aspects of Douhet's doctrine—his arguments that air power would make the armies and navies of the world obsolete—one cannot help noting that Douhet's arguments attack all the major missions of the present-day air force except strategic bombing. Douhet excluded the possibility of air defense, denied fighter aircraft a place in future air forces, argued that close air support and interdiction of the battlefield would be a waste of air resources, and claimed that the *only* role of an air force would be as a strategic bombing force. In terms of technical knowledge, Douhet argued that the more heavily armed bomber would always be superior to the fighter. Finally, Douhet had no conception that air war would require immense expenditures in terms of resources, men, and materiel and that only highly industrialized nations with a broad industrial base would be able to fight the air war of the future.³ Douhet's views were echoed by the many other enthusiasts of air power in Europe between the wars.

The reality of air power in the Second

World War was quite different. In the final analysis, it was to resemble the strategy of the First World War, except that attrition came in terms of aircraft and highly trained aircrews instead of mud-stained infantrymen. Month after month, year after year, the crews climbed into their aircraft to fly over a darkened continent. Those in charge of the air battle could only measure success in terms of drops in percentage points of bomber losses rather than in terms of yards gained. As one commentator has pointed out:

Despite the visions of its protagonists of pre-war days, the air war during the Second World War . . . was attrition war. It did not supplant the operations of conventional forces; it complemented them. Victory went to the air forces with the greatest depth, the greatest balance, the greatest flexibility in employment. The result was an air strategy completely unforeseen by air commanders.⁴

This is not to argue that strategic bombing did not play a major role in the eventual Allied victory in World War II. Its success, however, was very different from that envisioned by its advocates. The bombing offensive was simply incapable of preventing German industry from raising its production totals month by month—even in terms of fighter aircraft production. Yet the fact that German industry managed to produce an all-time high of 5000 fighters in September 1944 was an irrelevant footnote because by that time Allied air forces had won air superiority over Germany. They had done so not by strategic bombing but because the strategic bombing force had lured the Luftwaffe into the skies in February and March of 1944, where long-range Allied fighters had shattered its power.⁵ In a wider sense Allied air power had played one of the major roles in the victory over Germany. It destroyed the Luftwaffe, established air superiority over the battlefields of 1943-45, forced the Germans to divert a significant percentage of their military production to air defense,⁶

and aided combined operations capabilities by paratrooper drops and resupply missions, all of which enabled the Western powers to fight their way back onto the European continent. In those terms the contribution of air power was immense, but it was a contribution in which strategic bombing was one of several factors rather than *the* decisive factor as so many of its advocates were to claim after the Second World War.

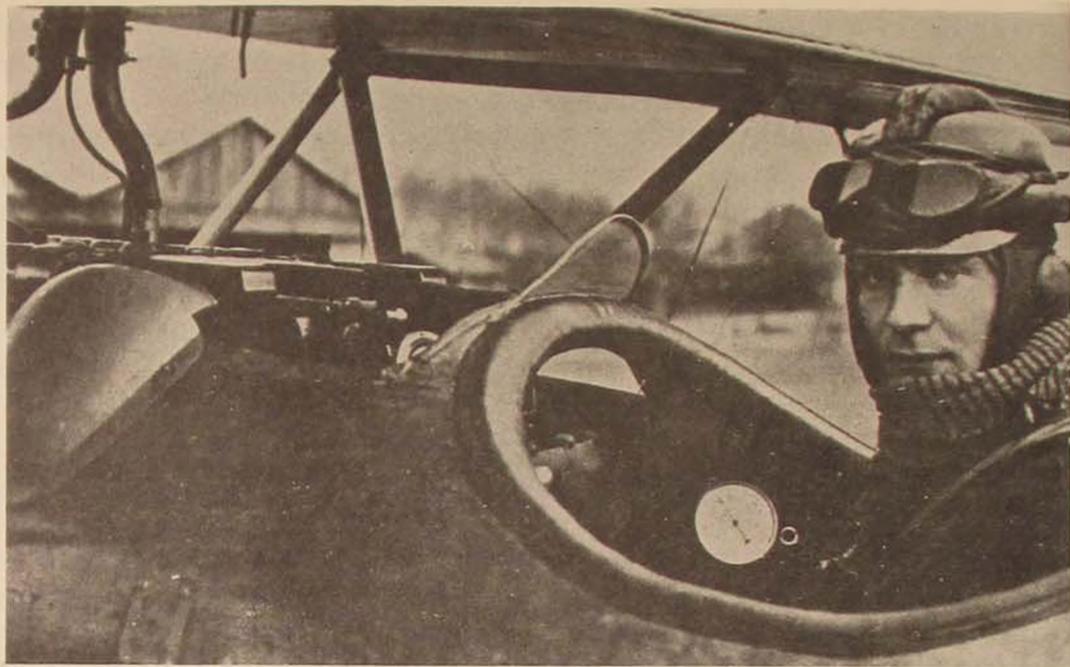
It is in the perspective of these comments that one must examine the development of air doctrine and air power in Britain and Germany between the wars. One must also note that very different strategic needs led to dissimilar air strategies and divergent concepts of air power. The British, living on an island and possessing the largest navy in Europe, could afford to think in terms of strategic bombing. First, it appeared that only through the air could an enemy strike at Great Britain, and thus throughout the interwar period the British would worry excessively about the threat of an enemy bombing offensive against the British Isles. Moreover, they could think in terms of a strategic bombing campaign against an enemy's homeland, while they ignored the land battlefield, because it would not be British territory that would be lost in the battles on the continent.⁷

German strategic problems, however, were the exact opposite. Germany was not an island power; she was a continental power. In any conceivable conflict that would involve the military forces of the German Reich, Germany would face the probability of land operations from the outset of hostilities. Thus, it would do Germany's strategic position little good if, at the same time that the Luftwaffe had attacked London, Paris, and Warsaw, Germany's enemies had defeated the German army in the border areas, and Germany had lost Silesia, East Prussia, and the Rhineland. Because fundamentally hostile powers surrounded German territory, the Germans had to think primar-

ily in terms of continental land warfare. Moreover, throughout the early period of rearmament (1933-37), the Nazi regime and its military advisers had to reckon on the possibility that Germany might face a preventive attack by her neighbors before the German army was prepared. Tactical air power offered an excellent means to redress the imbalance of forces.

THE Royal Air Force (RAF) owed its existence to the First World War and political pressures created by the German bombing raids on London. After the war, as Britain reduced military expenditures, the new service felt threatened by its sister services. With relatively few aircraft, RAF commanders feared that the loss of aircraft or crews to the navy (for aircraft carriers) or army (for close support missions) would destroy the RAF's existence as an independent organization.⁸ The response of the Chief of Staff, Lord Hugh Trenchard, to this perceived political threat was to create a doctrine of air power as an independent, that is, strategic weapon. Trenchard argued that air power alone could defend Great Britain and that its massive striking power could destroy Britain's enemies on the outbreak of war. Trenchard's theories evolved independently of Douhet's. Unfortunately, this doctrine and definition of air power as exclusively strategic bombing distorted the RAF's whole development and would have serious repercussions for Britain's prosecution of the Second World War.⁹

By the end of the 1920s, Trenchard and his strategists in the Air Ministry had created a doctrine of air power that excluded almost every possible role for the aircraft except strategic bombing. Typical of the Trenchard approach is a 1936 book, *Airpower and Armies*, by Sir John Slessor, a leading air force planner in the 1930s and later Chief of Coastal Command during the Second World War. In this work Slessor set

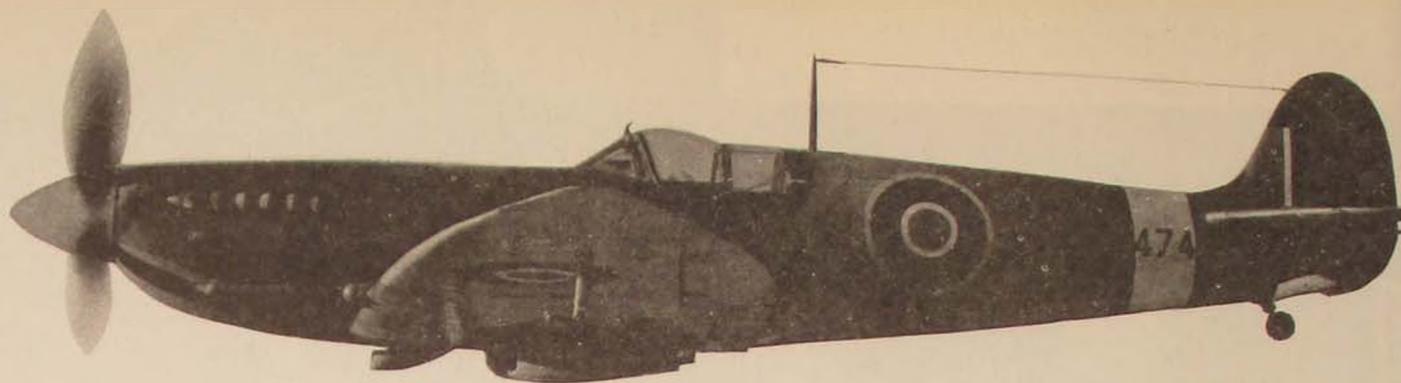




The High Command

*Continuity in German and British aviation leadership lends credence to the idea that World War I and World War II were but parts of the same protracted conflict. **Leutnant Hermann Göring** (facing page) was a highly successful fighter pilot in the first war, who rose to command the famous **Richt-hofen Flying Circus** after the death of the "Red Baron." An early Nazi activist, Göring became minister for civil aviation (actually, the head of the still-secret **Luftwaffe**) in 1933. He was named a field marshal by Hitler in 1938 and **Reichsmarschall**, nominally second only to Hitler in power, in 1940. He was captured by the Allies in the spring of 1945 and interviewed by the media shortly thereafter, as shown. . . . The Royal Air Force, which evolved as a separate service in World War I, was led by men who played a far less prominent political role than Göring but who were effective in developing an air doctrine during the interwar period that was to affect Allied air capability and performance in World War II and beyond. Among those leader-theoreticians were **Sir John Slessor** (above), **Lord Hugh Trenchard**, Chief of Air Staff during the twenties (above, right), and **Sir Arthur Tedder** (right), Deputy Supreme Commander under Eisenhower and Air Chief Marshal of the RAF.*





RAF Fighters

During the late thirties and early days of World War II, British single-seat fighters like the Supermarine Spitfire (above) and the Hawker Hurricane (facing page, top, in a later, cannon-armed variant) seemed as vulnerable to the Air Staff's attraction for multiplace fighters as to the Luftwaffe. At the start of the war the RAF had fourteen squadrons of Hurricanes, nine of Spitfires, and one of Boulton Paul Defiants, a two-seat fighter with all its armament in the rear turret (opposite, below). After a fleeting moment of glory at Dunkirk—briefly mistaking Defiants for Hurricanes, Luftwaffe pilots attacked from above and behind—the Defiant proved an easy target, was withdrawn from daylight operations.

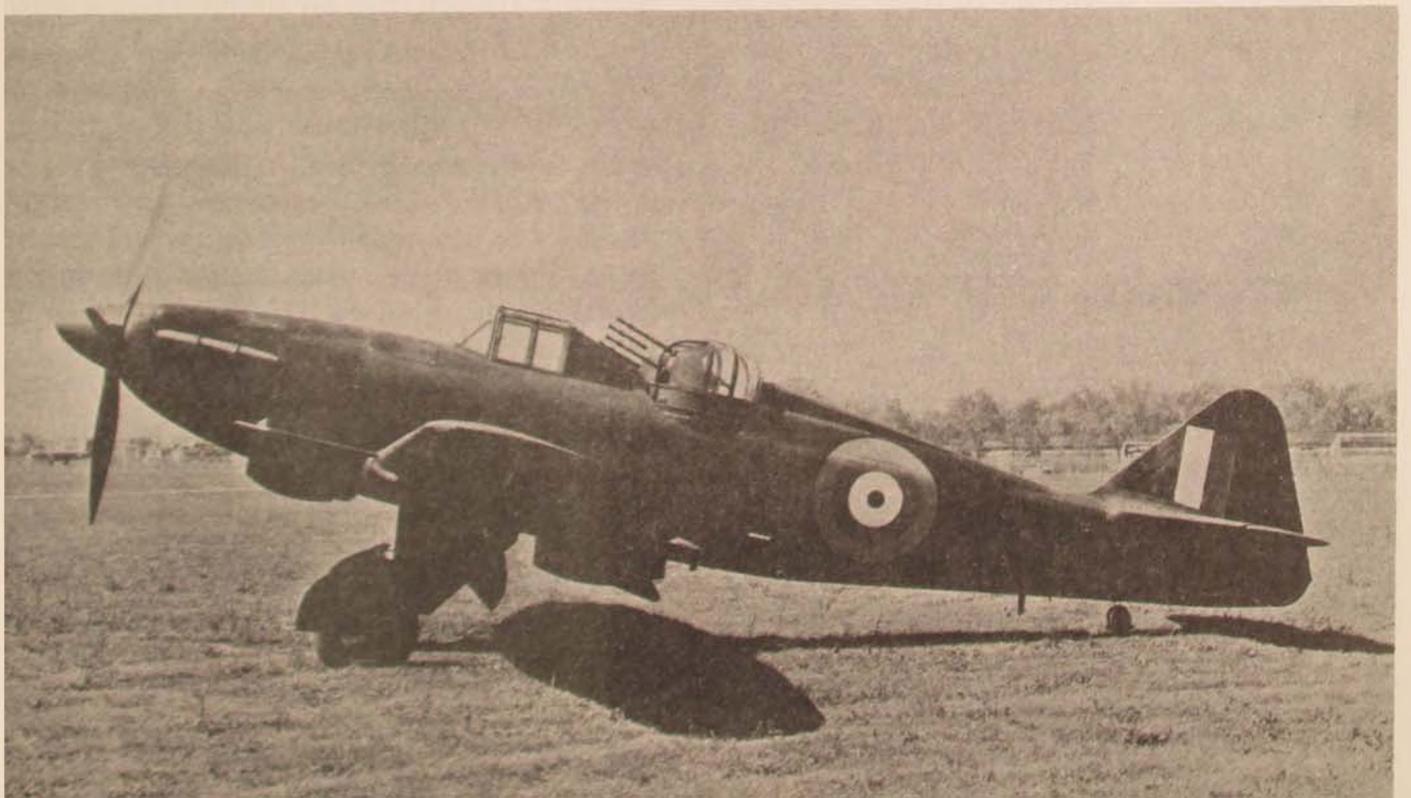
forth his views on the future of war. He argued that it would be all air combat and that air superiority could only be gained and maintained by a “resolute bombing offensive” against enemy centers. Such a strategy would force the enemy to use his air strength in a passive, defensive role and divert strength away from the primary task of strategic bombing, which alone could be decisive. Air operations would fall heaviest on the poorer and more unreliable segments of the population and would force the enemy to divert still more strength. Offensive operations on land would no longer occur, and armies would serve as frontier guards while bombers flew overhead. Slessor concluded that:

it is difficult to resist at least the conclusion that air bombardment on anything approaching an intensive scale, if it can be maintained even at irregular intervals for any length of time, can today restrict the output from war industry to a degree which would make it quite impossible to meet the immense requirements of an army on the 1918 model, in weapons, ammunition, and warlike stores of almost every kind.¹⁰

These comments are especially important when one considers that as Chief of Plans in the Air Ministry and as a member of the Joint Planning Committee of the Chiefs of Staff Slessor held a key position within the air force and British defense establishment.

What is particularly surprising considering the fact that in its own terms strategic bombing was the *raison d'être* for the Royal Air Force, almost nothing was done to prepare for this task. Prewar doctrine called for trained aircrews to precede the bomber force and mark the targets for the following aircraft. In the late 1920s, when asked how trained aircrews would find their targets, Sir Arthur W. Tedder, future Air Chief Marshal of the RAF, replied, “You tell me!”¹¹ The RAF was not to attempt to solve this problem until 1941, when analysis of mission photography revealed that half of the bombs dropped on Germany were landing in the countryside.¹²

In the late 1930s there was no clear conception of what was possible with the weapons of the time and with the weapons being developed. Admittedly, there was considerable difficulty in estimating capabilities



with so little experience on which to draw. In 1938 the Joint Planning Committee conceded:

In considering air attack we are faced with the difficulty that we lack the guidance of past experience in almost all the factors which affect it, and consequently the detailed methods of application and their effects are almost a matter for conjecture. We do not know the degree of intensity at which a German air offensive could be sustained in the face of heavy casualties. We do not know the extent to which the civilian population will stand up to continued heavy losses of life and property.¹³

Slessor was to admit after the war that the Air Staff's belief in the bomber before the war had been "a matter of faith."¹⁴ Supposedly, the cause of this state of affairs lay in the overcentralization of tactical planning within an Air Ministry that was not in daily contact with contemporary technical developments and aircraft capabilities.¹⁵ Yet, when Bomber Command achieved control of planning its mission, it would prove no more realistic in working out its plans until wartime evidence had proved how unrealistic had been all expectations and estimates.

It is clear that the experts felt that there would be little difficulty in finding and hitting targets. An estimate of the Committee of Imperial Defense claimed in 1936 that aircraft with automatic bombsights had an 11 percent chance of achieving hits on a battleship from 10,000 feet. The report did not mention ship movement or the problem of having to dodge antiaircraft fire and fighters.¹⁶ A writer in the *Journal of the Royal United Services Institute* claimed that in clear weather and from heights of 20,000 feet, 50 percent of bombs dropped would fall within a dockyard area such as Malta or Gibraltar. "Against a fleet at sea five to ten percent of hits could be obtained by day."¹⁷

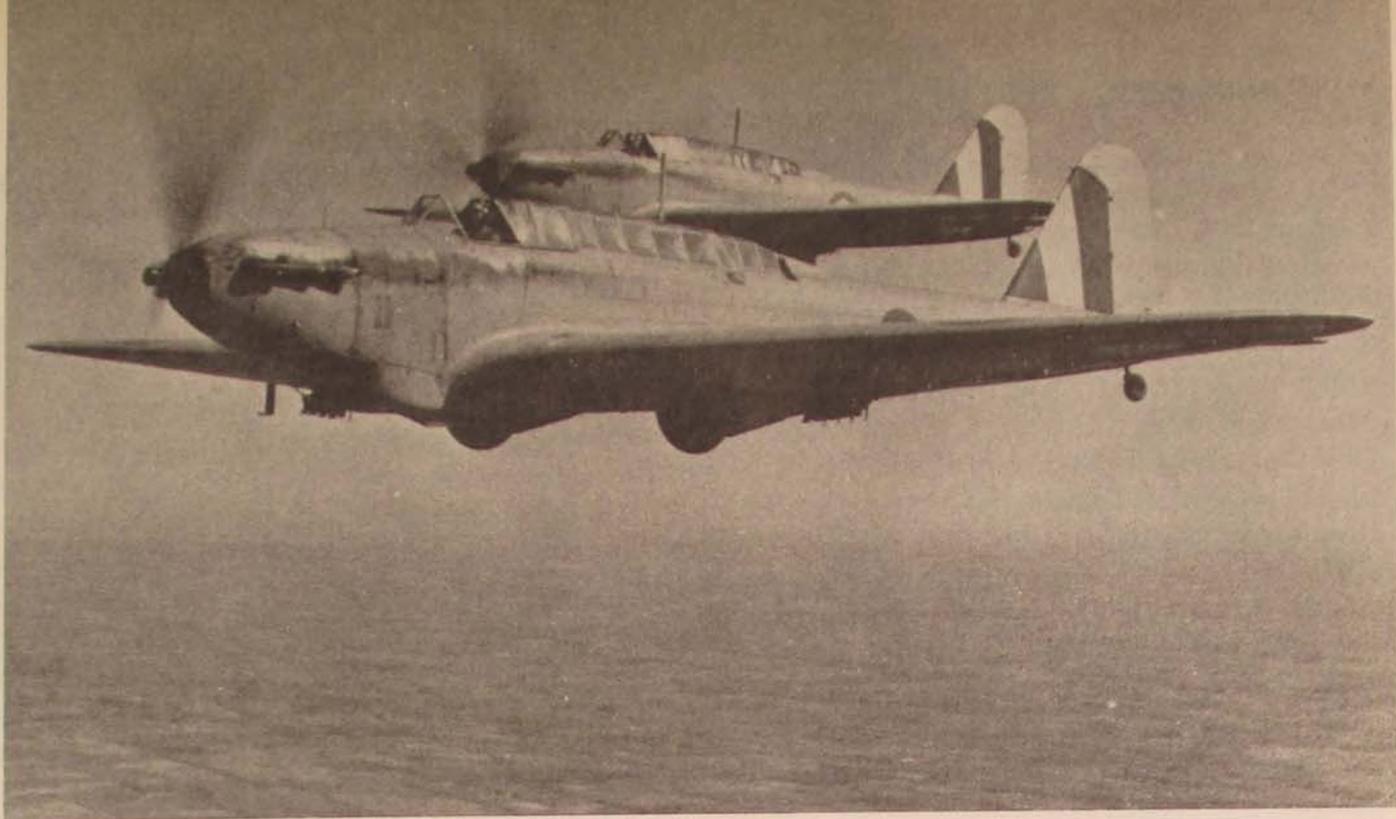
Such optimism was inexcusable because

evidence was already available on the problem of locating and then damaging proposed targets. In May 1938, the Assistant Chief of Air Staff admitted that:

it remains true, however, that in the home defense exercise last year, bombing accuracy was very poor indeed. Investigation into this matter indicates that this was probably due very largely to failure to identify targets rather than to fatigue.¹⁸

Moreover, in 1937 the Royal Air Force conducted a major test of bombing techniques. It distributed 30 obsolete aircraft in a circle with a 1000-yard diameter, and for one week Bomber Command bombed the stationary aircraft from high and low level. At the completion of the test, the bombing had destroyed only 2 aircraft, damaged 11 beyond repair, left 6 damaged but repairable, and missed 11 entirely.¹⁹

The emphasis on strategic bombing as *the* doctrine of the Royal Air Force was to have a pernicious effect on the development of the other aspects of air power. Even in air defense, which would win the Battle of Britain and save England in the summer of 1940, the Air Staff's record was less than sterling. Throughout the 1930s the Air Staff showed little interest in air defense, and papers setting forth the RAF's position consistently argued that air defense was a waste of money and had little prospect of blunting an enemy bombing offensive. Discussing a 1937 Air Staff study, Admiral Lord Chatfield, chief of naval staff, cast considerable doubt on the Air Staff's pessimistic estimates on air defense. Referring to the enormous sums being spent on defense measures, Chatfield commented that it was illogical to state that Germany's attacking capability would increase 600 percent in 1937. The First Sea Lord was even more doubtful on the report's claim that a German air offensive in 1939 would do ten times more damage than an attack in 1937. Significantly, it was Chatfield who emphasized the possibility of an effective air defense. The Air



At the beginning of World War II, Allied bombers were badly outclassed. The Fairey Battle, pathetically slow and lightly armed, was an easy prey to German flak and fighters alike.

Staff, at least in this memorandum, believed that air defense was impossible.²⁰

Ironically, it was the Chamberlain government, which for the most part had such an abysmal record in defense matters, and Prime Minister Neville Chamberlain in particular who forced an unwilling Air Ministry to invest substantial resources in air defense. On 1 October 1938 Sir Warren Fisher of the Treasury reflected bitterly on the course of the rearmament program from 1935:

When I insisted on the insertion in the report of passages such as these [on the need to build up Britain's air defense system] the representative of the Air Staff acquiesced with a shrug of his shoulders. The Air Staff proposals were, of course, again quite insufficient . . . and their lack of imagination and foresight has been fully equalled by their incompetence in all practical matters, including strategic policy.²¹

Fisher's warning on the Air Staff's incapacity to see beyond its dogmatic position is more than backed up by the technical attitudes

and positions taken by the staff throughout the 1930s. Despite the victory of the Supermarine S. 6 (precursor of the Spitfire) in the 1931 Schneider Trophy races, the Air Staff rushed the Harrow, Fury, and Hart into production in 1935 as a sop to the politicians.²² In 1936 Slessor argued in his book that the Royal Air Force needed only a few single-seat fighters.²³ The issue of the single-seat versus the two-seater fighter was one on which the Air Staff nearly made the disastrous choice of settling on the two-seater as the fighter of the future.²⁴ An Air Staff memorandum of June 1938 sets out the unreality of its position and its lack of understanding of the conditions of air war:

The speed of modern bombers is so great that it is only worth while to attack them under conditions which allows no relative motion between the fighter and its target. The fixed-gun fighter with guns firing ahead can only realize these conditions by attacking the bomber from dead astern. The duties of a fighter engaged in "air superiority" fighting

will be the destruction of opposing fighters . . . For these purposes it requires an armament that can be used defensively as well as offensively in order to enable it to penetrate into enemy territory and withdraw at will. The fixed gun fighter cannot do this.²⁵

Only the spirited objections of Air Vice Marshal Sir Hugh Dowding, Commander in Chief of Fighter Command, kept the emphasis of British fighter production on Spitfires and Hurricanes and not on the two-seated Defiants.²⁶ As late as May 1940, the Air Staff would make an effort to shut down the production lines of Spitfires and Hurricanes.²⁷

Unfortunately, the record of the Air Staff on the other aspects of air power was just as dismal, but it was not mitigated by the interference of the Chamberlain government. The Royal Air Force absolutely rejected close air support for the army as one of its missions. After a 1939 combined air force-army exercise, General Sir Archibald Wavell commented that the RAF had given no thought to support for ground operations, and as a result its pilots were incapable of performing that mission.²⁸ In a 1937 Chiefs of Staff meeting, the Army minister, Leslie Hore-Belisha suggested that the Spanish Civil War had indicated the value of close air support, only to be contradicted by the Chief of Air Staff, who commented that this was a gross misuse of air power. Air Ministry reports, he added, indicated that the Italians were so impressed with the results of low flying support missions that they had diverted 50 percent of their aircraft to that mission. He hoped that these reports were true, but doubted whether the Italians would be so stupid.²⁹ In November 1939, Air Staff doctrine on close air support ran along the following lines:

Briefly the Air Staff view—which is based on a close study of the subject over many years—is as follows: the true function of bomber aircraft in support of an army is to isolate the battlefield from reinforcement and supply, to

block or delay the movement of reserves, and generally to create disorganization and confusion behind the enemy front. . . . But neither in attack nor in defense should bombers be used on the battlefield itself, save in exceptional circumstances . . . All experience of war proves that such action is not only very costly in casualties, but is normally uneconomical and ineffective compared with the results of the correct employment of aircraft on the lines described above.³⁰

This is indeed an astonishing document when one considers that the Polish campaign had just ended. In France in 1940, requests by the First Armored Division for close air support met with objections that such suggestions were impracticable and unnecessary.³¹ Moreover, in July 1938, the Chiefs of Staff dismissed the employment of parachute troops with the argument that the use of aircraft to drop paratroopers would divert them from more useful employment as bombers.³²

In 1936, Group Captain Arthur Harris, the future commander of Bomber Command, claimed that reconnaissance of enemy bases was the only way to locate his naval forces and that use of aircraft over the ocean would be a waste of effort. In addition, Harris told the Joint Planning Committee that the Air Staff reserved the right to withdraw aircraft from subsidiary missions (i.e., reconnaissance) for use in the primary mission of strategic bombing.³³ Not until late 1937 did the Chief of Air Staff concede most unwillingly that aircraft allocated for trade protection would remain in that capacity, and that only after consultation with the Chiefs of Staff and War Cabinet would they be transferred temporarily to other functions.³⁴

On the technical side Lord Tedder discovered opposition to the construction of a major aircraft engine factory, not from the Treasury but from a senior Air Ministry official. The Air Ministry opposed the proposed construction because construction would take two years, and supposedly in

1937 the Royal Air Force could not afford to waste money on projects that would not return immediate benefits.³⁵

In summation, the dogmatism of the Air Staff hindered the development of a broadly based conception of air power in Great Britain. At the outbreak of war, Britain possessed a strategic bombing force that was incapable of carrying out daylight operations in the face of German opposition and could not find its targets at night. For air defense, Britain possessed a small but capable force, but the existence of that force³⁶ and of the radar network that supported it was due primarily to the efforts of the Chamberlain government and not to the Royal Air Force: In all the other aspects of air power—close air support, interdiction, airlanding operations, long-range reconnaissance, and maritime operations—the Royal Air Force had done almost nothing to anticipate the requirements of the coming war.

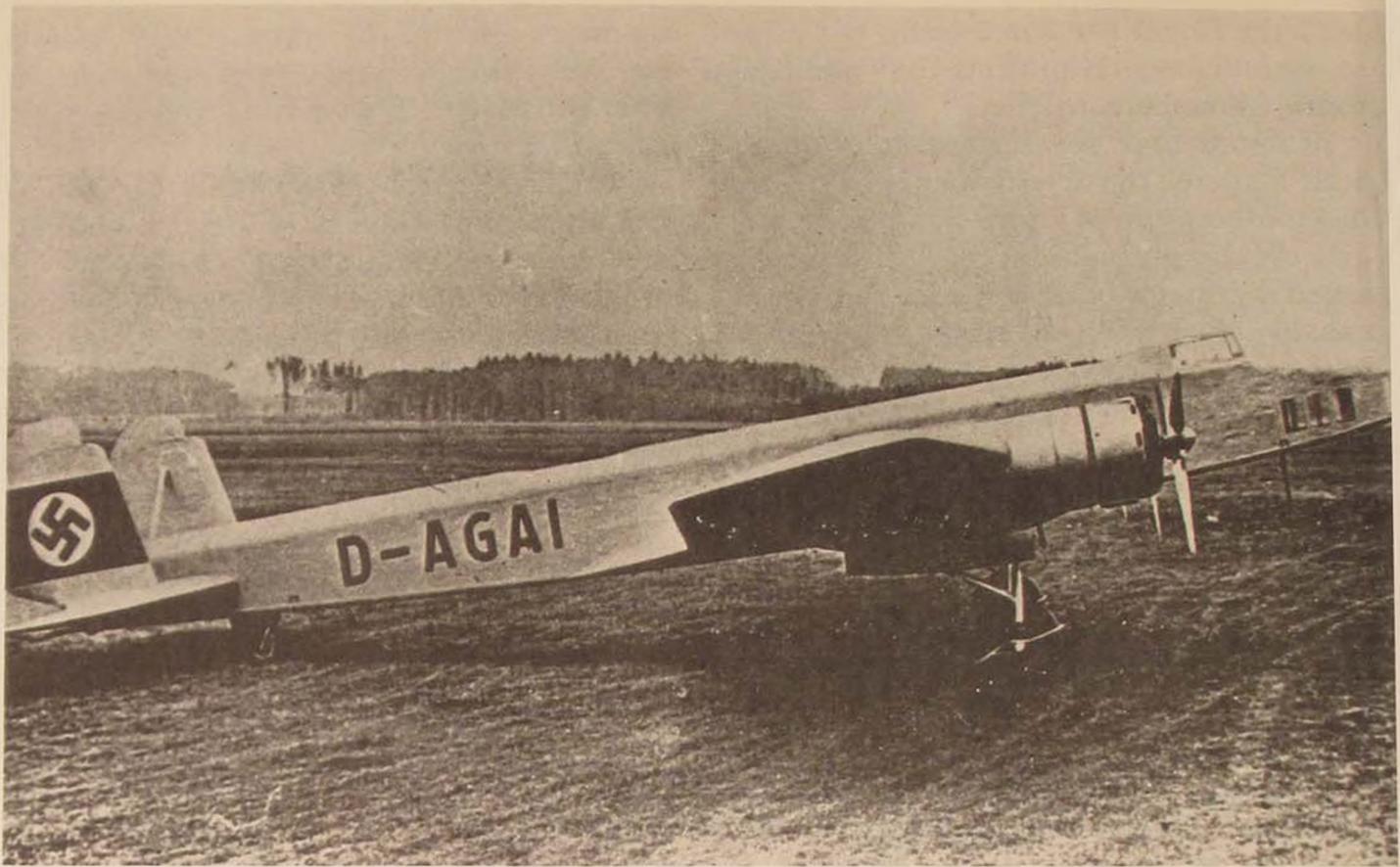
THE early development of the Luftwaffe significantly differed from that of the Royal Air Force. The Treaty of Versailles forbade Germany from using aircraft as a weapon of war. During the period of disarmament, the army assumed the responsibility for preparing a future German air force. When the Nazis came to power, Göring immediately set about to create an independent air force, which Hitler was to proclaim in 1935. At inception, the Luftwaffe received an infusion of not only World War I flyers but a number of army general staff officers as well. The result was that army-air force relations were quite good, especially at lower echelons. Göring's political position in the Nazi hierarchy gave the new service an unassailable position. It certainly had no reason to feel threatened by the German navy in view of that service's diminutive size. Thus, the Germany Air Staff did not feel the need to create a doctrine that justified its existence by exclud-

ing major roles for the other services. Moreover, the army background of many senior officers made the Luftwaffe receptive to army requirements.

Since the Second World War, American and British advocates of strategic bombing have criticized the Luftwaffe as being "in effect the handmaiden of the German army" and for being unprepared to launch a strategic bombing offensive.³⁷ This view is grossly unfair to the Luftwaffe and misses the significance of German doctrine and preparation for the air war. In 1936 the German Air Ministry issued a doctrinal statement, entitled *Die Luftkriegführung*, which based German doctrine on a realistic appraisal of the aircraft possessed by the Luftwaffe. This exposition of German doctrine underlined four major missions for air power: air superiority, strategic operations, battlefield interdiction, and close air support. It stressed that the Luftwaffe would be part of a team rather than a service with a wholly independent mission and that the final decision in any war would come only through the combined efforts of the three services. Finally, the statement expressed doubt as to whether strategic bombing by itself could achieve a decisive result such as destroying an enemy's industrial capacity or terrorizing his civilian population.³⁸

Thus, the Germans approached the question of strategic bombing from a more skeptical point of view than did the British. A partial explanation lies in the German experience in Spain. Terror bombing had produced, for the most part, a counterproductive effect. Captain Heye of the *Seekriegsleitung* made the following report based on conversations with Luftwaffe officers serving in Spain.

Disregarding the great military success accompanying use of the *Luftwaffe* for the immediate support of army operations, one gets the impression that our attacks on objects of little military importance, through which in most cases many women and children . . . were hit,



are not a suitable means to break the resistance of the opponent. They seem far more suited to strengthening the resistance. . . . Doubtless the memory of the air attack on Guernica by the [Condor] Legion still today produces an after effect in the population and permits no friendly feelings for Germany in the population of the Basques, who earlier were thoroughly friendly to Germany and in no manner communistic.³⁹

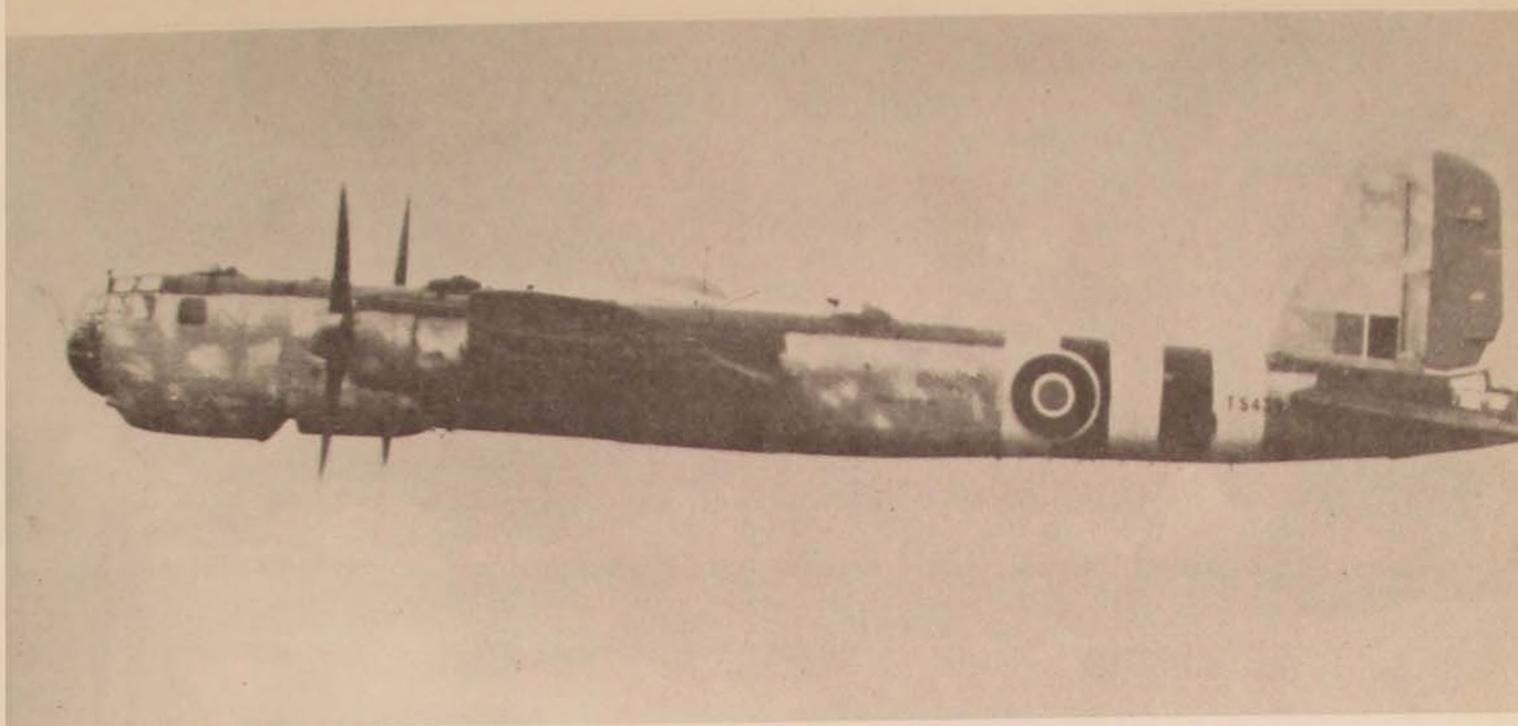
In addition, German air experts were willing to credit defensive measures against air attack, whether active or passive, with a greater ability to reduce casualties than did their counterparts in Great Britain. A British delegation to Germany reported the comment of a German civil defense official in the following terms:

there was a tendency to exaggerate the number of casualties that would result from a modern air raid. He said hostile aircraft had a long

distance to come and a long distance to get home again. The air casualties would be very considerable. Great reliance was being placed on the German air force and on their active defense measures.⁴⁰

Moreover, the Germans do not seem to have underestimated the difficulties involved in carrying out strategic bombing over long distances. The future Field Marshal Albert Kesselring warned in March 1939 that, even given the technical competence of crews and aircraft, it was doubtful whether the average German bomber could hit its target with any degree of accuracy in bad weather.⁴¹

Yet, it should be noted that the Germans never deliberately abandoned the effort to achieve a strategic bombing capability.⁴² Rather, technical problems hindered the creation of a strategic bomber force. In 1936 the German Air Ministry canceled the development of the four-engined Dornier



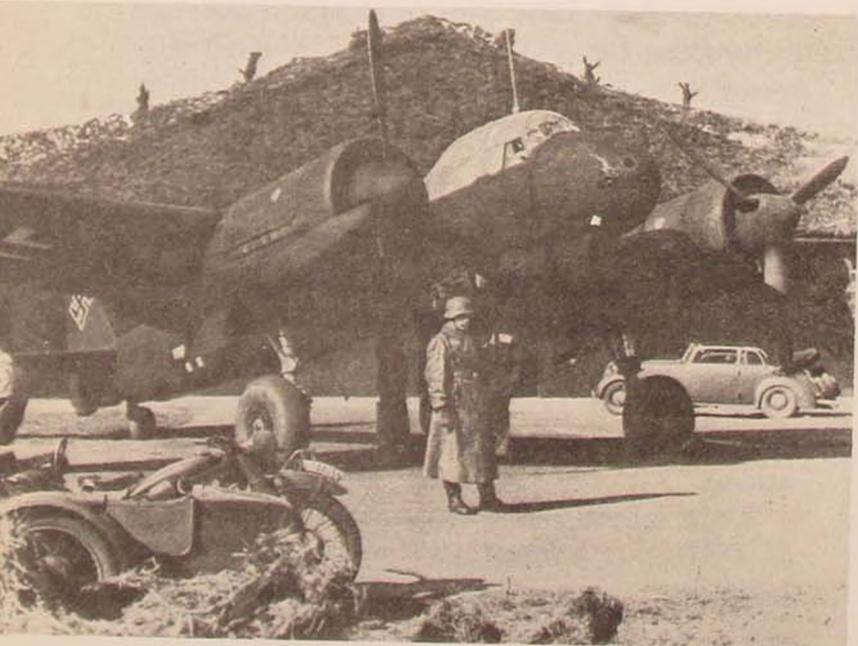
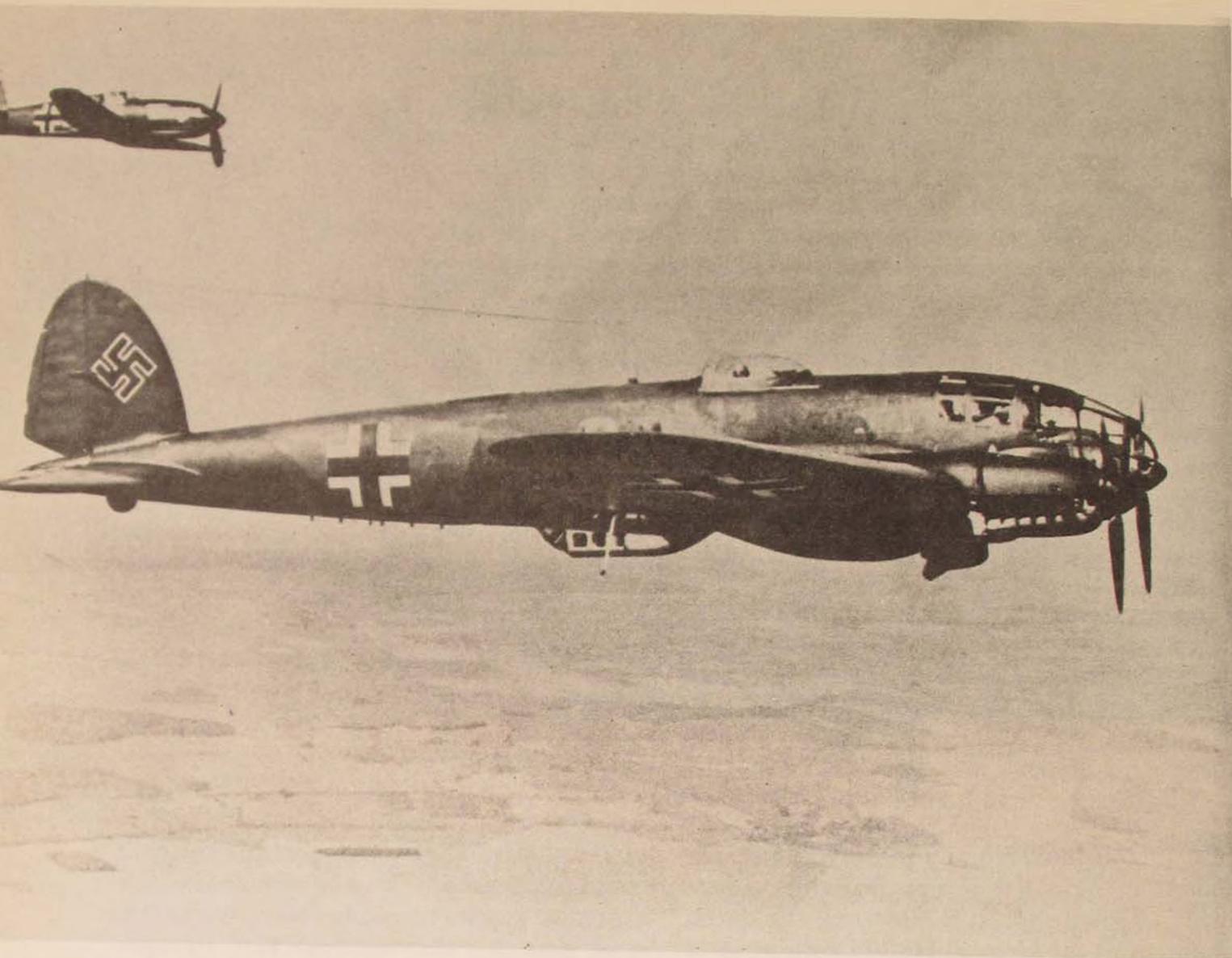
Well aware of the technical difficulties to be overcome, the Luftwaffe nevertheless made a serious effort to achieve a strategic bombing capability. Development of the Dornier Do 19 (facing page) and Junkers Ju 89 heavy bombers was dropped only after Germany proved unable to produce engines with enough power in the early thirties. . . . The Heinkel He 177 (above, seen after the war in British markings) was the best Nazi long-range strategic hope; but the developmental problems proved too great: it was not operationally effective.

Do 19 and Junkers Ju 89 prototypes because suitable engines were not available to provide adequate speed.⁴³ However, the development of the Heinkel He 177 continued in the belief that that aircraft was the best bet to provide the Luftwaffe with a long-range strategic bomber. It was not, and the Germans never managed to surmount the technical problems inherent in its conception and design.

There is one other major factor that one must consider in German strategy and that is the weak economic base on which the German strategic situation rested. Given the financial and economic constraints on German rearmament, could the Germans have afforded the cost of building up a strategic bombing force had a four-engined bomber been available? The answer is probably no.⁴⁴ Moreover, given the fact that in wartime a blockaded Germany would be short

of every critical raw material except coal, could the Germans think in terms of launching a strategic bombing offensive at the same time that they were carrying out operations on land? In terms of German strategy before the conquest of France in 1940, the answer was clearly no. A German staff study on the possibility of an air offensive against Great Britain, written in the fall of 1939, warned that a bombing offensive against the British Isles would open up western Germany to air attacks that would seriously hinder army preparations for the Western offensive. Moreover, the use of fuel and munitions for an air offensive would severely restrict the supplies available for ground operations.⁴⁵

Throughout the immediate prewar period as well as the first years of the war, Luftwaffe planning aimed to destroy enemy air forces at the outset of hostilities by well-



Luftwaffe Winners

The failure of the Luftwaffe's heavy bomber program was initially compensated for by success with smaller aircraft. The Junkers Ju 88 (left) and the Heinkel He 111 (above, with an experimental He 113 in an early war propaganda photograph) were effective for interdiction missions; early versions of the Bf 109, commonly called the Messerschmitt Me 109 (facing page), were the equal of the British Spitfire and were even superior to the Hurricanes.

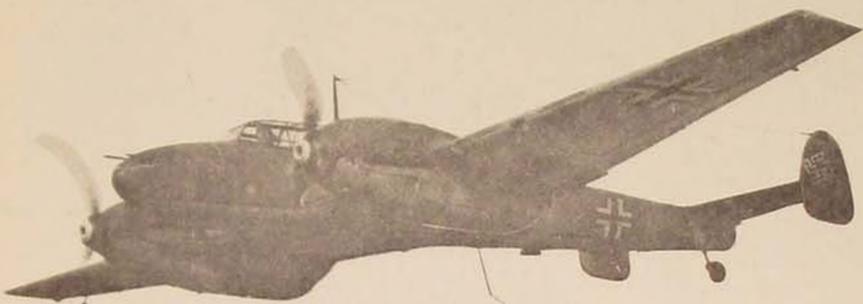


planned strikes against his air bases and forward operating areas and by contesting the air space over the zone of operations. Only after eliminating enemy air power would the Luftwaffe turn to the support of army operations. Both these missions would take priority over raids against "factories and enemy rear areas."⁴⁶

It would be in the other aspects of air power—close air support, interdiction, and reconnaissance—that the Luftwaffe would prepare in the years before the Second World War. Considering the capabilities of the aircraft at that time as well as the primitive nature of navigational systems, this would be a wise strategy.⁴⁷ The experiences gained in Spain directly contributed to the German development. Fighter tactics, the tactical employment of close air support, and interdiction of enemy rear areas all significantly advanced. Interestingly enough,

the Luftwaffe proved flexible enough to experiment with the use of 88-mm anti-aircraft guns against tanks. However, one must note that German operations in Spain always remained at a rather low level of commitment.

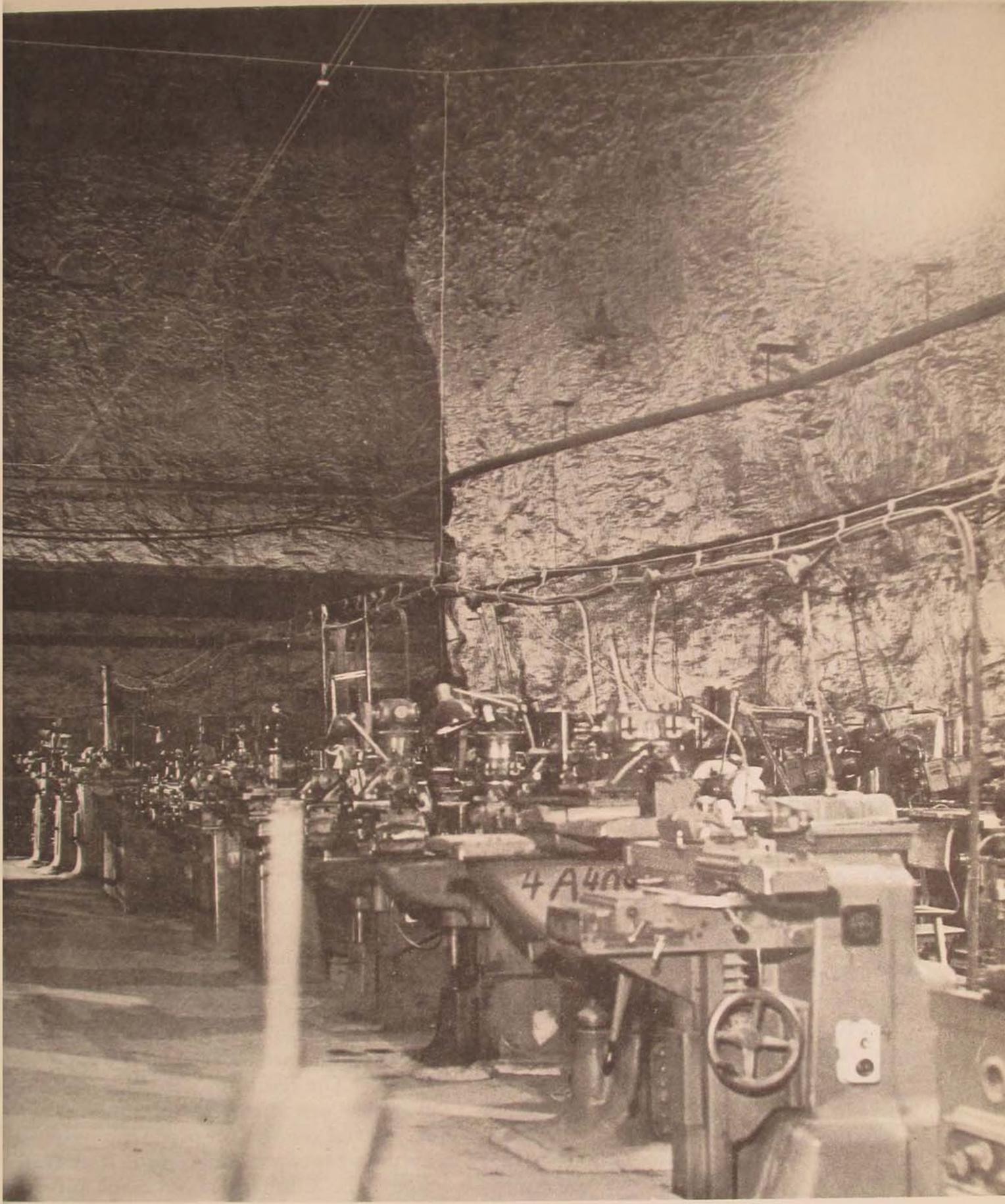
German strategy tied Luftwaffe operations closely to the army. Throughout the late 1930s Luftwaffe operational planning emphasized the protection of German air space as a major mission, so that army mobilization could proceed unhindered. Early planning concentrated on operations over a static battlefield or in support of nonmotorized infantry formations, but by the late 1930s Luftwaffe commanders were working closely with the new panzer and motorized infantry divisions, a combination that would prove devastating. Because of the shortage of heavy artillery,⁴⁸ German army commanders proved almost too enthusiastic on the subject of close air support. A report



The Nazis dig in.

*In its planning for World War II, the Luftwaffe relied heavily on the twin-engine, multiplace Bf 110 (above), frequently referred to as the Me 110. (Official German aircraft designations were assigned by factory, not by designer; when Willy Messerschmitt designed the Bf 110 in 1934, he was then chief engineer of the *Bayerische Flugzeugwerke* [the Bavarian Aircraft Works], thus Bf rather than Me). Successful over Poland, the Low Countries, and France, the fast but unmaneuverable Bf 110 proved highly vulnerable to agile Spitfires and Hurricanes in the Battle of Britain and was withdrawn from daylight service as a fighter. . . . The consequences of the failure of German air doctrine are underlined in the extreme measures taken by German industry to escape Allied devastation from the air. The underground aircraft engine factory in an abandoned quarry (right) was overrun by U.S. troops in the closing days of the war.*





on the Wehrmacht maneuver of 1937 pointed out that targets in support of army operations would have to be selected carefully in order to maximize effect. The Luftwaffe would only be successful when it directed its attacks against massed and rear area targets that could critically affect the flow of operations. Unfortunately, the report pointed out, army commanders were in the distressing habit of calling for close air support on any target, no matter how insignificant or what the conditions.⁴⁹

By 1939 the Luftwaffe had evolved aircraft and doctrines that could provide substantial aid to battlefield operations. The Stuka would prove an admirable aircraft for the immediate support of German panzer units, while aircraft like the Heinkel He 111 and the Junkers Ju 88 were excellent aircraft for interdiction missions. The Bf 109 was the equal of the Spitfire and superior to every other fighter in Europe, and German fighter tactics would prove to be the most effective in the first aerial clashes of the war. Nothing contrasts more clearly the realism of German doctrine with that of their British opponents than the operations along the Meuse River in the first days of the French campaign. On 13 May 1940 German troops crossed the Meuse largely through the intervention of Luftwaffe close air support. On 14 May, with only one thin pontoon bridge across the Meuse to support the bridgehead, the Royal Air Force intervened in the battle in an effort to destroy the bridge. The result was not only a complete failure but led to the slaughter of the Fairey Battle light bombers committed to the mission.⁵⁰

One must also mention one other important development that enabled the Luftwaffe to contribute to the early victories. Unlike the RAF, the German air force was willing to invest significant resources into an airlanding capability. While the Germans had barely enough paratroopers for a brigade at the beginning of the war, these

troops played a role all out of proportion to their numerical strength in Norway, Holland, and particularly in the assault on Fort Eben Emael in Belgium.⁵¹

The eventual failure of the Luftwaffe in the Second World War reflected not so much the failure of German doctrine but ironically German organization. The defeat in the Battle of Britain as well as in Russia resulted to a large extent from the failure of the Luftwaffe's support services to meet adequately the extensive demands of operational commitments. This was to a large extent due to Hitler's and Göring's fascination with numbers. Theoretically, the Germans based their concept of air power on the belief that a flying unit was not combat-ready unless it possessed modern, reliable aircraft backed up by a first-class maintenance organization and a supply system that guaranteed adequate numbers of replacement aircraft and reserves of spare parts.⁵² This the Luftwaffe was never able to do because Göring refused to follow recommendations that the German aircraft industry devote 20 to 30 percent of production to the establishment of adequate inventories of spare parts.⁵³ Instead, the Germans assigned production almost exclusively to first-line strength. As a result, throughout the war years the Luftwaffe was chronically short of spare parts, had constantly to resort to cannibalization, and ran low operationally ready rates.

By the late 1930s the production of numerous models by the German aircraft industry had led to many maintenance, training, and supply problems. In December 1938, General Erhard Milch, State Secretary for Aviation, pushed through a major reorganization of the production system so that industry could concentrate on a few superior aircraft.⁵⁴ The result, unfortunately for the Luftwaffe, was that concentration in the first years of the war on production figures prevented experimentation on new aircraft design. The Germans never made up the

lost time and fought the great air battles of 1943-44 with basically the same equipment they had used against Poland.

THERE is a certain irony in contrasting the development of military forces in Great Britain and Germany between the wars and particularly in the 1930s. In terms of intellectual fermentation and a discussion of the future paths of war, Britain led the rest of the world. J. F. C. Fuller and B. H. Liddell Hart laid the theoretical basis for modern mechanized warfare in their writings. At the same time writers like L. E. O. Charlton publicized the "modern" theory of air power.

It is well to insist on this exclusive point of view at once. Air power is bombing capacity and nothing else; all the other various employments of aircraft, as auxiliary to an army or a navy, or as units in the scheme of home defense, being unrelated to this one main fact. An assessment of the air strength of a country should be based exclusively on the weight-carrying capacity, the speed, the range, and on the number of its bomber squadrons.⁵⁵

Tragically, in the 1930s the British military establishment would reject the theories of Fuller and Liddell Hart on the future of land war and quite literally ban their advocates from the army.⁵⁶ On the other hand, the German army high command, while

somewhat skeptical of the claims of armored officers, was willing to devote substantial resources to the creation of a panzer force. On the question of air power, however, the Royal Air Force would wholeheartedly embrace the new "revolutionary" idea that air power was strategic bombing and as such had changed the rules of the game. The Germans did not, and their conservative, broad conception of air power would prove devastating when combined with armored, mechanized warfare. The British official history of the strategic bombing offensive puts the problem of air war succinctly:

Air superiority is not simply a question of being able to use an air force. It is a question of being able to use it effectively. From the point of view of the bombers, for example, it is not simply a question of getting through. It is a question of getting through and doing effective damage.⁵⁷

In that sense the German air force of 1939 could render important service because it could do "effective damage." The Royal Air Force could not. Moreover, not until the Allied air forces could match the Luftwaffe's diversity of capability could the Western powers maximize the real, as opposed to the theoretical, potential of air power.

Ohio State University
Columbus, Ohio

Notes

1. See particularly the article by D. C. Watt, "The Air Force View of History," *Quarterly Review*, October 1962.

2. See particularly William Emerson, "Operation Pointblank," Harmon Memorial Lectures, No. 4 (Colorado Springs, 1962) and Charles Webster and Noble Frankland, *The Strategic Air Offensive against Germany, I, Preparation* (London, 1961).

3. General Giulio Douhet, *The Command of the Air* (London, 1943), pp. 16-17, 44, 55, 218, 239.

4. Emerson, p. 41. See also Charles Webster and Noble Frankland, *The Strategic Air Offensive against Germany, II, Endeavour* (London, 1961), pp. 138-39.

5. Charles Webster and Noble Frankland, *The Strategic Bombing Offensive against Germany, III, Victory* (London, 1961), pp. 131-32. Emerson, pp. 36-39.

6. Those many critics of the morality of the strategic bombing campaign never address the problem of what the military effect would have been had the Germans been able to divert the resources expended in their air defense measures into tank production.

7. In fact, the British did not admit the necessity of committing ground forces to the defense of the continent until February 1939. Public Records Office (PRO) CAB 23/97, Cab 8 (39), Meeting of the Cabinet, 22.2.39., p. 306.

8. Watt, p. 430.

9. Stephen Roskill, among others, has criticized the refusal of the RAF air staff to use its long-range bombers to support and protect Britain's trade routes, thus needlessly prolonging the battle of the Atlantic and the Allied convoy losses. See Stephen Roskill, *The War at Sea, II* (London, 1956), pp. 86-90.

10. Sir John Slessor, *Airpower and Armies* (London, 1936), pp. 15, 65, 68, 80, 214-15.
11. Guy Hartcup, *The Challenge of War* (London, 1967), p. 126.
12. See particularly the report of Mr. Butt to the RAF Bomber Command, "Examination of Night Photographs, 15 August 1941," in Charles Webster and Noble Frankland, *The Strategic Bombing Offensive against Germany, IV, Appendices* (London, 1961), p. 205.
13. PRO CAB 53/40, COS 747 (JP), 15.7.38., CID, COS Sub Com., "Appreciation of the Situation in the Event of War against Germany in April 1939," p. 47.
14. Sir John Slessor, *The Central Blue* (New York, 1957), pp. 203-4.
15. *Ibid.*, p. 205.
16. PRO CAB 4/24 1258B, 30.6.36., CID, "The Vulnerability of Capital Ships to Air Attacks," p. 449.
17. Wing Commander R. A. Cochrane, "Gold Medal Essay (Air), 1935," *Journal of the Royal United Services Institute*, May 1936.
18. PRO AIR 2/2598, Air Ministry File, # S41137 (1938).
19. Basil Collier, *The Leader of the Few* (London, 1957), p. 170.
20. PRO CAB 53/7, COS/198th Mtg. 18.2.37., CID, COS Sub Com. Minutes, p. 31.
21. PRO CAB 21/902, Letter from Sir Warren Fisher to Neville Chamberlain, 1.10.38., p. 4.
22. Watt, p. 435.
23. Slessor, p. 51.
24. The Luftwaffe faced the basic same choice, between a two-seater (the Me 110) and a single-seater (the Me 109). It did, however, opt proportionately for considerably more Me 110s than the RAF opted for Boulton Paul Defiants.
25. PRO AIR 2/2964, 17.6.38., Air Staff Note on the Employment of two-seater and single-seater fighters in a Home Defence War; see also AIR 2/2964, 20.6.38., Minutes by DD Ops (Home).
26. PRO AIR 2/2964, Headquarters Fighter Command, RAF Stanmore, Middlesex, 25.6.38.
27. The suspicion exists that Dowding was removed from Fighter Command shortly after the Battle of Britain and never given another command because his success was a direct contradiction to prewar doctrine.
28. John Connell, *Wavell, Scholar and Soldier* (New York, 1964), p. 204.
29. PRO CAB 53/8, COS/219th Mtg., 19.10.37., CID, COS Sub Com. Minutes, p. 149.
30. PRO CAB 21/903, 18.11.39., "Bomber Support for the Army," memorandum by the air staff; see also the letter from Admiral Lord Chatfield to Prime Minister Chamberlain, 15.11.39. on the air force arguments against the provision of special units for the close support of the army.
31. Major General Evans, "The First Armored Division in France," *Army Quarterly*, May 1943, pp. 57-58.
32. PRO CAB 53/40, COS 747 (JP), 15.7.38., CID, COS Sub Com., "Appreciation of the Situation in the Event of War against Germany in April 1939," Joint Planning Committee Appreciation.
33. PRO CAB 55/2, JP/127th Mtg., 3.12.38., CID, Joint Planning Committee of the COS Committee, p. 5; see also the argument between Admiral Lord Chatfield and Ellington on the provision of aircraft to protect trade routes: CAB 53/6, COS/190th Mtg., 21.12.36, CID, COS Sub Com. Minutes, pp. 240-43.
34. PRO CAB 53/8, COS/221st Mtg., 4.11.37., CID COS Sub Com. Minutes, p. 12.
35. Lord Arthur Tedder, *With Prejudice* (London, 1966), p. 13.
36. Even the construction of all-weather runways, an absolute requirement for air defense (as well as the eventual bomber offensive) met opposition from the Air Ministry because they would be difficult to camouflage. Collier, pp. 162-63.
37. For this view see particularly Dennis Richards, *The Royal Air Force, 1939-1945* (London, 1953), p. 29; Asher Lee, *The German Air Force* (New York, 1946), pp. 16-17; and, surprisingly, Webster and Frankland, *The Strategic Air Offensive against Germany, I, Preparation*, p. 125.
38. Paul D. Deichmann, *German Air Force Operations in Support of the Army* (New York, 1968), pp. 9-13.
39. OKM, B.Nr., 1. Abt. Skl. 1a 961/38 g. Kdos., Berlin, 14.7.38., Geheime Kommandosache, National Archives and Records Service (NARS), T-1022/2957/PG 48902.
40. PRO CAB 63/14, I.O. (S)1., 19.7.37., Air Raid Precautions Department Intelligence Section, Visit to Berlin of Maj. F. L. Fraser, "Interview with Ministerialrat Grosskreuz."
41. Bundesarchiv/Mitilärarchiv (BA/MA) RL 2 II/101, Zusammenhänge zwischen Meteorologie und Taktik, Vortrag: General der Flieger Kesselring, Chef der Luftflotte 1., 1.3.39., p. 5.
42. Yet historians of air power even today are still arguing that the Luftwaffe deliberately abandoned strategic bombing after the death of General Walther Wever in an airplane crash. See Herbert M. Mason, Jr., *The Rise of the Luftwaffe* (New York, 1973), p. 215.
43. Karl Heinz Volker, *Die deutsche Luftwaffe, 1933-1939* (Stuttgart, 1967), pp. 132-33; and H. Schliephake, *The Birth of the Luftwaffe* (Chicago, 1971), pp. 38-39.
44. The British faced this problem of the cost of building up a strategic bombing fleet of four-engined bombers in 1938-39 and decided that the cost was prohibitive. For a discussion of the financial and resource constraints on German rearmament see Williamson Murray, "The Change in the European Balance of Power, 1938-1939," Ph.D. dissertation, Yale University, 1975, Chapter 5, "The German Economy."
45. BA/MA, RL 2 II 24, Chef 1, Abt., 22.11.39.
46. BA/MA, RL 7/55, Lw. Gruppenkommando 3., 23 Mai 1938, "Bericht über die Reise für obere Dienststellen," p. 9.
47. Robert J. Young in his article, "The Strategic Dream: French Air Doctrine in the Interwar Period, 1919-1939," *Journal of Contemporary History*, October 1974, suggests that the aspirations of the French air staff to create a strategic bombing force were entirely correct. He does not understand that these aspirations were just as unrealistic and just as incorrect as the views of an army general staff that could not understand that close air support might be of some use to ground operations.
48. On the shortage of artillery see Erich von Manstein, *Aus einem Soldatenleben* (Bonn, 1958), p. 334; and Walter Bernhardt, *Die deutsche Aufrüstung* (Frankfurt, 1969), pp. 96-97.
49. BA/MA, RL 2 II/157, Bericht, "Wehrmachtmanöver (Luftwaffe)," 1937, Band 4, Erfahrungen, p. 7.
50. See particularly Alistair Horne, *To Lose a Battle, France 1940* (Boston, 1969), pp. 290-94.
51. See particularly Telford Taylor, *The March of Conquest* (New York, 1958), pp. 210-14.
52. Milch Collection, Imperial War Museum, Reel 55, Vol. 57, Der Chef des Nachschubsamts, Nr. 3365/38, g. Kdos., Berlin, 3.11.38., Anlage L. E. 2. Nr. 15.222/38 g. Kdos, Berlin, Okt 1938, "Erfahrungsbericht über die Spannungszeit 1938," p. 3270.
53. Suchenwirth, *The Development of the German Air Force, 1919-1939*, p. 148.
54. Milch Collection, Imperial War Museum, Reel 64, Vol. 65, p. 7400: 13.12.38., "Vortragsunterlagen für den Vortrag vor dem Herrn Generalfeldmarschall," p. 7419.
55. L. E. O. Charlton, *The Menace of the Clouds* (London, 1937), p. 28.
56. J. F. C. Fuller was promoted to major general in the early 1930s and never received an active command. Percy Hobart was removed as the commander of the armored division in Egypt (that he had trained so well) at the beginning of the war. The summer of 1940 found him in the Home Guard while his contemporaries in the German army had managed to revolutionize land warfare in the campaign that spring. There were many other examples.
57. Webster and Frankland, *The Strategic Air Offensive against Germany, I, Preparation*, p. 21.



fire counter fire

TACTICAL AIR POWER WITHIN NATO

a growing convergence of views

MAJOR DONALD J. ALBERTS

DR. STEVEN L. CANBY's presentation in the May-June 1979 issue of *Air University Review*¹ and Dr. Edward N. Luttwak's critique of American "attrition doctrine" in the August 1979 issue of *Air Force Magazine*² both suffer from what I perceive to be a misunderstanding of tactical air power history and doctrine. This is particularly true of the United States Air Force doctrine in regard to a possible war in NATO Europe. Canby's article, while persuasive, well documented, and, in most instances, accurate,³ misses the essential trend of air power doctrinal thought as it is evolving in NATO. Dr. Luttwak acknowledges "his indebtedness to Steven L. Canby for key ideas in the article,"⁴ and as to air power application, there is indeed a similarity of views, especially regarding the reputed USAF overreliance on defense suppression and attrition as objectives.

It has been a common complaint of air power proponents over the years that those steeped in the traditions and training of land warfare do not appreciate the power and magnitude of tactical air applications properly conducted. I must admit to a similar inclination in that I believe this fundamental difference in perspective is at the heart of many of the commonly cited prob-

lems and deficiencies of strategy and tactics in fighting a European war and in the various critiques that these two authors have leveled at current U.S. conventional war philosophy.⁵ While I share some of the concerns expressed by these authors, my perspective is different, and it leads me to a different conclusion concerning the proper role of air power and the trend in NATO thought.

Canby mixes procurement policies, tactics, operations, weapons employment, and other diverse subjects into the same bag, thereby conveying a misleading impression of both the diversity and commonality of opinion within the NATO air forces. Canby asserts that, "In the past, the USAF pushed common doctrine and tactics among the NATO air forces but has now muted it."⁶ The latter part of this statement is demonstrably incorrect.

In the past year or two, four important efforts toward common doctrine were either completed or initiated. Allied Tactical Publication (ATP) 42, a book of common doctrine on counterair operations, was drafted, negotiated, and is presently circulating for ratification among NATO member nations. ATP 42 stemmed initially from a USAF initiative at the NATO Tactical Air Work-

ing Party in December of 1977. Other recent efforts toward common doctrine and tactics deal with offensive air support, tactical air doctrine, and electronic warfare in air operations. ATP 33(A), *Tactical Air Doctrine*, and ATP 27(B), *Offensive Air Support Operations*, were ratified by the United States in September 1979.⁷ Additionally, another much-needed manual concerning electronic warfare in air operations has been initiated in ATP 44, the first preliminary draft of which was prepared by a combined United States, United Kingdom, Germany, and Netherlands drafting committee hosted and chaired by the USAF.⁸ The effort toward establishing common doctrine in NATO is accelerating, not being muted.

Canby implies that the USAF was trying to force common *tactics* on these allies, something that the allies resisted. This is also far from accurate. I suspect that fighter pilots in the USAF would resist anyone's attempting to standardize and dictate tactics for them. The standardization attempt is directed toward procedures, not tactics. Admittedly, it has taken some time for the various people involved to understand what is meant by a procedure and what is meant by a tactic. A tactic is *how* a particular task or operation is performed against the enemy. A procedure is the organizational or structural method of approach. The difference is oftentimes in perspective and the level from which one views and analyzes the problem at hand. It is a little like the difference between tactics and strategy—one level's tactics is another level's strategy. For example, the establishment of a high-altitude missile engagement zone is a tactic from the perspective of the manager of the air defense net in his battle, but the process by which that zone is established and the constraints it automatically places on a fighter pilot in pursuit of an enemy aircraft constitute procedures.

NATO air forces in their air doctrine

recognize several types of air operations—all of which will have to be performed in order to successfully blunt a Warsaw Pact attack upon NATO Europe, particularly one that occurs with main emphasis in the Central Region. Of particular importance for this discussion are counterair operations, offensive air support operations, and interdiction operations. Counterair is subdivided into offensive counterair (activities undertaken at NATO initiative and carried to the enemy to destroy his air power) and defensive counterair (or, air defense to some). Offensive air support is subdivided into close air support (CAS), battlefield air interdiction (BAI), and tactical air reconnaissance. All except air defense, by definition, are offensive air operations.

In discussing offensive air operations, Canby asserts:

For the short run, the diversity of aircraft design inhibits common tactics and delivery techniques. Among other factors, commonality will not be possible for the next two decades, as the attack aircraft now coming into the inventory—Jaguar, Harrier, Alpha Jet, and Tornado—operate best at low levels. New U.S. aircraft on the other hand, give greater maneuverability and better performance at the medium and higher altitudes. From the European viewpoint the present diversity in operational tactics and techniques offers them the best possible situation. Without being tested in war, there is no way of knowing which approach is the more valid. However, U.S. reliance on high technology to overcome ground air defenses forces the Soviets to devote disproportionate efforts to counter the U.S. systems. This allows the Europeans an alternative approach, relying more on organization and procedures than on technology, thus permitting them to buy larger numbers of aircraft at the expense of elaborate electronic environment preparation. It also means that since the U.S. is buying expensive defense-suppression systems, the Europeans could always, if necessary, supplement U.S. forces should their own approach fail. . . . The Europeans do not argue that the U.S.

imitate their style; rather they argue that NATO gains by the two approaches. Thus, while sincerely believing in their own approach, the Europeans retain a hedge against failure by the U.S. . . . the U.S. has no similar hedge and is more constrained in shifting to the European style because of equipment in general and training in particular.⁹

There is some truth in these assertions but not for the reasons stated. The most important, I would maintain, is that the Soviets have not devoted a disproportionate effort to counter U.S. systems because of the U.S. reliance on technology but rather because of the traditional U.S.-NATO reliance on offensive tactical air power, primarily interdiction and close air support. (And, to be truthful, Soviet doctrine also derives from the World War II experience against the more or less combined arms teams of the Wehrmacht and Luftwaffe.) It is interesting to note that the Soviets and their allies doctrinally have placed what might be considered an inordinate amount of effort into air defense: enormous numbers of interceptor aircraft, extensive radar ground control intercept (GCI) netting, antiaircraft artillery (AAA) guns in massive numbers, and, more recently, surface-to-air missiles (SAMs). The Soviets started to build this massive air defense umbrella well before the USAF started "elaborate electronic countermeasures," and only after providing themselves with a truly impressive set of capabilities did they acquire an offensive air capability to complement their traditional ground offensive power. If one assumes the Soviets to be rational (and one must if one hopes to deter them from inimical activities, as NATO has), it is simply not logical (even allowing for a perceived traditional mania for the defense of Mother Russia) to provide so much defense against something that is not feared.

NATO's problem is somewhat different. Soviet reliance on extensive air defenses to protect their ground offensive force from NATO air has created what many perceive

to be a very decided blunting of NATO's most potent counterweapon to the Soviet offensive, air power. NATO's problem is how best to overcome the defenses and reassert the potential advantage enjoyed for many years. There are and have been differences in approach among the allies on how to accomplish this. These differences extend to how best to apply limited air assets against the expected *modus operandi* indicated by Soviet doctrine and exercises. The Canby quote tends to hide these more fundamental differences in approach in the discussion of tactics.

But the tactical differences need explaining. The preferred USAF tactic for penetrating into hostile air space *would* be a medium altitude penetration. However, most of the practicing fighter forces realize that our preferences may be very difficult to enact. We may not have sufficient suppression of enemy air defense (SEAD)¹⁰ assets to fight in this manner. We are not convinced that the British preference for low altitude penetration is necessarily better—better being defined as more survivable and efficient at accomplishment of the mission. I think a quick scan of the fighter squadrons in Europe will show widespread use of low-level planning.

It must be remembered that in Vietnam, the USAF's initial reaction to the relatively unsophisticated SA-2 SAM threat was to fly into defended areas at low altitudes. *Visually* aimed barrage fire from automatic weapons and World War II vintage AAA guns caused losses—the type of losses that might, if sustained over a period of intense air operations, be prohibitive. Airspeed is no necessary cure; neither is going even lower. It is a sad fact of life that airplanes can run into bullets (yes, bullets) fired in front of them. There is nothing in the British approach that necessarily precludes such losses. If the enemy gunner knows of aircraft presence, he does not have to aim his gun to bring about a kill—he merely needs

enough lead to put out a volume of fire in front of the aircraft. The aircraft then runs into the fire.¹¹

Again, the preferred approach, built on experience both real and vicarious, would be to penetrate *above* the ground fire envelope of AAA and automatic weapons (AW). You cannot evade the ground fire by flying low if you do not know where the concentrations are. But, under present force constraints, flying above the AAA and AW threat is not especially practical. In the view of many, we do not possess enough SEAD assets to allow medium altitude penetration. Again, I suspect that if Canby performed a survey of USAF fighter pilots he would find that their tactics are quite similar to those of the British and the Germans. The cited difference in training has very little to do with preferred tactics or the expected threat.

The differences in training have much to do with constraints caused by the peacetime air traffic control system, flying safety, and an organizational constraint that frowns on aircraft accidents. Low altitude is a relative thing but its restrictions are not governed by tactical considerations, rather by flying safety. It is not that the "USAF at Nellis AFB, Nevada, and Marine Corps have rediscovered the advantages of on-the-deck flight operations."¹² Rather, it is a case of increased willingness to accept the risks attendant on flying at those altitudes in a peacetime training environment. Through rather strenuous past efforts, arising from within the fighter community, the USAF is more willing to accept such peacetime risks in certain places in order to train as we will fight.

I feel that it is fair to acknowledge that we have been struggling over the problem of how best to provide direct support to the ground forces and, more important, what is the best form of air power application to aid in the accomplishment of the overall objective—the defeat of a Warsaw Pact offensive. I also return to my earlier assertion that

views here are converging—slowly, but surely converging. There is a growing realization that *all* forms of offensive air will be needed to defeat the total offensive. There cannot be a reliance on CAS solely, or interdiction solely, or air defense alone. Rather, the need for each will be a proportion of the total air effort. Further, I would maintain that these earlier differences in emphasis were, and to a great degree still are, governed more by the views held by ground commanders than by air commanders, and by ground staffs than by air staffs. This more fundamental problem affects, to varying degrees, all NATO armed forces that have both land and air forces.

What we are really faced with is a problem of strategy or, at least, of optimum asset usage in a very scenario-dependent threat situation. In the past, despite an established command structure, NATO air forces were not really NATO air forces. By this I mean that the Royal Air Force generally worked with the British Army of the Rhine, USAFE generally worked with the U.S. Army in Europe, and the Luftwaffe worked with the Bundeswehr.¹³ Only in air defense was there an integrated structure, and this structure was a long time in coming. Essentially, NATO was not planning on fighting a combined war against the enemy but rather was planning on a series of national battles against the enemy.

The establishment of the Military Agency for Standardization (MAS) within NATO and the overall movement toward rationalization, standardization, and interoperability (RSI) has allowed greater air force interaction at all staff levels. We are now talking to each other. One of the most startling early realizations in this process was that the various air forces were using the same words to connote different concepts or different words to connote similar concepts. Over time, and after much discussion, it has come to be appreciated that in air doctrinal terms, at least, the air forces are not that

far apart in fundamental thinking. There are differences, however.

An example is CAS. There are those in the United States who maintain that the Europeans do not believe in CAS. This statement by itself lacks sufficient precision to determine the truth or falsity of it. The Europeans believe in CAS, but not in the way the USAF wants to conduct CAS. To be more specific, the Europeans lack faith in the survivability of the *airborne* forward air controller (FAC) under probable combat conditions. The *function* of providing an air firepower complement to supplement ground organic firepower to forces locked in combat is seen as vitally necessary. Both the Germans and the British have FACs, on the ground, to help control this application of air firepower. The basic point is that, in the European view, the alternate procedures (those without the availability of an airborne FAC) must be known and practiced. This is the more conservative and surer course to follow. If the airborne FAC is survivable and there, then it can be used. The danger lies in not having alternative means of bringing air firepower to bear in the absence of an airborne FAC.¹⁴ Common procedures allow USAF air to support British or German troops and, conversely, the procedures allow RAF or Luftwaffe aircrews to use airborne FACs to support the U.S. Army.

This, of course, leads directly to the broader issue—how best, with the resources available, to affect the land battle. Airmen, in general, have traditionally felt that the farther from the actual point of land force combat air power can be applied, the better. It is not just a concern with interdiction and supplies, as is often maintained,¹⁵ but rather, it is a concern with attacking the enemy's combat power in its fullest sense. The more successful air power is in disrupting or destroying the enemy's combat potential, the less evidence there is for the ground forces to observe in assessing that effectiveness as it applies to the ground battle, par-

ticularly when the ground force is on the defensive. It is this phenomenon that has led to the ground force misperception of air power. The results simply are not visible to ground elements. The enemy battalion that is obliterated 100 kilometers behind the combat zone never reaches the combat zone and does not enter into battle and does not affect that battle.¹⁶ The ground commander sees the enemy that is being engaged. Each element of the enemy that is engaged represents danger that must be dealt with: the enemy battalion 100 kilometers away is not a problem today—it may be a problem tomorrow or next week, but the ground commander's problem is right now.

The theoretical disagreement in NATO is not so much between air forces but between certain national air forces and the same nations' army. As Canby and Luttwak have made clear in other places, the NATO armies have somewhat different philosophies on how to fight.¹⁷ The importance that the various armies place on CAS and other air operations differs from army to army, not necessarily from air force to air force. And each nation has its own version of the Department of Defense, which has an input into the debate of how best to fight.

My impression is that among the NATO armed forces, the divergence of view on how best to use air is greatest in the United States and perhaps least in the German forces. The German army will only call for CAS on the defensive when it is absolutely necessary to save the day. Some elements in the U.S. Army, on the other hand, seem to want to be able to count on a specified amount of air, both planned and on standby, guaranteed at all times. This is the age-old problem of the control of air assets, laid to rest (or so we thought) in 1943, that keeps coming back in the United States again and again and yet again.¹⁸

One of the things that NATO has done to compromise this issue is battlefield air interdiction, or BAI. BAI may be new to Viet-

nam-era Americans, but it is a relatively old concept (albeit Western), perhaps first used by Americans in 1944 by General Patton in conjunction with 9th Air Force in Normandy.¹⁹ BAI is directed primarily at those enemy forces, resources, and formations not yet engaged but positioned to affect the land battle directly.

To be more specific, and place the concept in its most complex environment, the targets with which BAI is to deal are enemy second echelon regiments or divisions, moving toward contact with friendly troops already engaged by enemy first echelon regiments/divisions and enemy air defense units.²⁰

Air interdiction, and what Americans (particularly those involved in land warfare) have come to associate with that term, affects the land battle in the long-term perspective.²¹ CAS affects the land battle in the now. BAI contributes directly to the land battle in the short- or near-term—in the next few hours or maybe as late as the next day.²²

Air power is applicable as firepower from the enemy front line of own troops (FLOT)²³ all the way to his heartland. From a war perspective, one of the most relevant variables is time. Wars are made up of a series of battles involving space, force, and time. If all forces are deployed opposite one another at the outset of hostilities, a single climactic battle might be the entire war, but this has seldom been the case. The less critical any single battle or engagement is to the outcome of the war, the more force can be husbanded, or used elsewhere, to create a decisive situation in one's favor. Air power affects the time factor. If applied against the rear of the enemy, it may not affect the outcome of the first battle, but it may guarantee that there will only be a small battle to fight in the second week of the war or perhaps on the second day of the war. From an air person's perspective, air power is properly applied in the context of the war and the win-

ning of the war, not necessarily in the context of winning any particular land battle.

This doctrinal truth derives in part from one of the fundamental characteristics of air, its flexibility. Air can be applied anywhere in the theater of operations, bounded only by the performance capabilities of individual systems and enemy resistance. Unlike ground firepower platforms, which can only be relocated slowly and over short distances, air can be massed and directed against target systems quickly and over long distances. It is this flexibility that gives air its potency from the perspective of the theater commander. Air is a "strategic reserve" that can be shifted to any area of the theater that is being threatened. It can always be used offensively, even if the ground forces are forced on the defensive. While it may not always be wise to do so, air can always be sent against the enemy to confound him, whereas ground forces cannot be that easily turned.

IT is this train of thought that causes my objection to Luttwak's critique of U.S. operational style in NATO. His main concern relates to the inadequacy of a style of combat dedicated to attrition under conditions of numerical inferiority. Luttwak holds that a maneuver strategy would be far more appropriate to the times. I do not necessarily disagree with this thrust, but I most certainly take exception to the implication that is drawn with reference to the application of air power. Luttwak maintains:

To do its work, which is to help in the *land* battle, the US Air Force (USAF) plans to defeat the array of Soviet anti-aircraft guns and missiles by attrition and sheer weight of materiel: special "defense suppression" aircraft are deployed to attack Soviet radars directly, while other special aircraft are to neutralize Soviet radars with electronic countermeasures. . . . In the first few days of a NATO

war, when air power would be needed most to give time for the ground forces to deploy, the USAF would, in fact, be busy protecting its own ability to operate at all.

It is interesting to note that others have reacted differently. The Royal Air Force (RAF) simply cannot afford to fight it out with Soviet air defenses; its plan is to *evade* rather than defeat them. The RAF has decided to use its aircraft in the immediate rear of the battlefield, to attack Soviet reinforcement echelons rather than the first wave of Soviet forces on the battlefield itself—where defenses are thickest. . . . The RAF approach is “relational” maneuver; that of the USAF a form of attrition.²⁴

There are many points of disagreement in just these two short paragraphs, some of which relate to the same disagreements generated by Canby's exposition. First, and perhaps foremost, air power's role is *not just* to help in the land battle, rather it is to help win the war—the total battle—and achieve the military environment necessary for the attainment of NATO political goals. As pointed out earlier, efficient use of scarce resources may indicate that the optimum use of air assets, *depending on the tactical and strategic situation existing at the outset of hostilities*, may have nothing to do with the land battle—or, it may have all to do with it. The assumption is made that NATO ground forces would still be deploying at the initiation of hostilities. This may be true but is only one scenario of possibility, one contingency of many which must be planned for and thought through. More than this, it is also an implicit assumption that NATO ground forces would be universally deploying, which is not the realistic case. We might expect, *for example only*, that the U.S. V and VII Corps and the German I and II Corps to be “on line,” with the other corps still deploying; in short, a differential rate that would indicate a needed flexibility in the application of air to reduce that threat created by the differential deployment rate. The tactical situational possibilities are myriad. The

form of possible and available responses in the use of air is also myriad. The selection of response is a function of NATO commanders (not solely USAF) and, most important, that response desired by SACEUR and his subordinate commanders, most probably CINCENT and COMAAFCE.²⁵

The response would, in the first place, constitute some mix of air, ranging from (theoretically) all effort dedicated to defensive counterair to all effort dedicated to offensive counterair. The point to be made is that the theater commander decides how best to meet these priorities, and, eventually, forces are applied against each priority in the weights of effort indicated.²⁶ The process by which this is accomplished in NATO is termed “apportionment and allocation.” The procedures for doing this exist and have been agreed on by all NATO nations. These procedures are based on the principle of centralized control at the highest practical level and decentralized execution, a principle favored by the USAF and RAF since 1943. To think of tactical air as being applied solely to one category or another creates false dilemmas, which is what Luttwak has done here. But, if the appropriate commander, at a certain time, decides that *all* effort should be dedicated to stopping tanks at the front opposite the Belgian I Corps through the air operation of CAS, it could theoretically be done and would be done. The procedures exist and have been agreed to by all NATO air forces (and, as a matter of administrative fact, by all NATO armies as well).

Of all the air support operations envisaged, CAS is the only one that is inherently attritive in the sense of that word as used by Luttwak. In fact, a primary reason that one performs CAS is in order to attrit an immediate threat to ground units. But here the analogy to the dilemma of attrition versus maneuver that is seen by both Luttwak and Canby as plaguing U.S. *ground* tactical style breaks down. For air, it is not a question of attrition versus maneuver, but rather

a question of a targeting scheme designed to produce primarily attrition or primarily disruption through selective destruction. Air power *is* maneuver. The concept of maneuver that applies to ground forces is inherent in the application of tactical air power. The great debate within air power circles is how best to take advantage of this inherent flexibility—the ability to be wherever the friendly commander desires—in light of the enormity of the enemy threat posed to ground forces. Should we go after supply lines and transshipment points, or does the Soviet logistic practice render this approach ineffective in a short, intense war? Must we kill tanks, or can destruction of a certain percentage of enemy vehicles force logistic and mutual support breakdowns in his plan of attack? Or, is the most optimum use of limited air assets to be found in a mixed destruction/disruption targeting strategy directed against the enemy's mobility—his ability to move forces forward or laterally?

The concern over USAF attritive efforts against the Soviet air defense system as contrasted to the RAF approach of evading the system is ill-founded for several reasons. The examples cited are taken from two very different types of operations, offensive counterair in the cited case of the USAF and BAI in the case of the RAF. Of more import is that fact already alluded to: both the USAF and the RAF forces lose their national identity functionally when NATO goes to war. Rationalization, standardization, and interoperability is directed toward the possibility of that reality. If the theater commander decides that air can be used to gain control of the air, both the RAF and USAF assets can, and probably will, be used to perform the counterair tasks. The USAF specialized SEAD assets are not reserved to support U.S. forces only—these assets can be employed wherever the SEAD support is most needed in light of the priority of the air operations being conducted. The specialized assets will be used as needed.

In terms of commonly agreed NATO doctrine, an air *campaign* undertaken against the enemy ground-based air defense net is made up of offensive counterair operations. It is pursued in one of two ways: attacking known targets (acquisition radar sites, control centers, or SAM sites, for example) or by a fighter sweep, using specialized aircraft to find mobile targets and targets of opportunity—mobile SAMs or airborne aircraft with some priority indicated—based on the threat posed to friendly forces. The tactics of how one gets to the target to perform offensive counterair have not been completely agreed on, nor are they likely to be, given the differing aircraft characteristics.

I N the larger perspective, both Luttwak and Canby miss the point in the application of SEAD assets. These assets are limited in number and thus must be used selectively in support of air operations. Which operation or series of operations these assets are dedicated to support on any given day is a command decision that is bound to be very scenario-oriented. If CAS is the order of the day, and SEAD area support is available and required, it will and should be used. There is no disagreement on this point among the NATO allies. If BAI, AI, or offensive counterair are ordered and defense suppression support is available, it will and should be used to disrupt and deceive or destroy the enemy by suppressing the defenses so that other friendly force elements (allied as well as USAF) are not destroyed. What Luttwak forgets is that *targets* are defended, be these targets in the first enemy wave, the second echelon, or the enemy's rear areas. The RAF cannot evade all defenses; it too must deal with those in the second echelon and around point targets. There is nothing "relational" in Luttwak's sense of the word about a one-on-one confrontation between a SAM site and a fighter. A more careful

investigation would show that the USAF and the RAF have very similar approaches when it comes to attacking the second echelon, which is the real world application of Luttwak's RAF example.²⁷

The rest of my objection to Luttwak's criticism relates to Canby's discussion of operational style and, to an extent, tactics. Control of the air is a critical thing to the attainment of victory, at least in conventional war.²⁸ Modern Soviet air defense, particularly SAMs, has made the ability to gain even local air superiority quickly over any portion of the battle zone a far more difficult task. Any application of air in any portion of the battle zone—at the front or behind it—will be subject to the enemy's attempt to control the air. The question that must be asked on the level of warfare is what degree of risk and threat to friendly air's ability to continue fighting can be accepted in order to stem a more immediate threat. Time is a big factor again. If the tanks are pouring through open gaps and the theater commander is faced with disaster if those particular tanks are not stopped, air will be used to attempt to stem the tide, regardless of losses.²⁹ But, if a critical situation does not exist, a more economical and longer-term decisive use of air is indicated: counterair and interdiction.

Securing control of the air, which now entails defeat of the ground-based portion of the air defense net as well as the defeat of enemy interceptors, removes resistance (and lowers attrition suffered by friendlies) to all friendly offensive air efforts. In the NATO context, two facets of this problem need to be addressed.

When the Israelis failed to suppress enemy air defenses in the first days of the 1973 October War, "... Israel lost almost a quarter of her air force in three days."³⁰ Israeli air doctrine is quite clear: they should have and would have (if left up to air persons to decide) gained control of the air first. But a greater threat to the total defense was per-

ceived, and the emphasis was shifted. The Syrian tanks in particular needed to be stopped. When that threat was dealt with, the Israelis did indeed try to gain control of the air, and the loss rates decreased. What is unknown—and cannot be known with certainty—is whether the overall losses (both ground and air) would have been less if the Israelis had indeed created an air situation similar to that of 1967 by the second day, wherein the Israeli Air Force could roam over the front at will, bringing unopposed firepower to bear on hostile ground formations wherever they were found. Every aircraft lost to a SAM on its first sortie represents a very great magnitude of lost effectiveness of subsequent sorties. This added difficulty—defeat of the ground-based portion of the enemy's air defenses—is only one aspect of the overall problem. While I do not want to take time here to further develop this idea, there are those of us in the Air Force who still do not feel that even the USAF has taken sufficient steps to guard prudently against this threat to our operations. Beyond this, the USAF, for better or worse, is the only NATO air force to have faced SAMs and a sophisticated air defense net based on multiple and redundant radars and command and control sites. While we may not be right, we were not totally ineffective in the face of such defenses, and our thinking on specialized assets to defeat such things is based on empirical evidence.

The other portion of this problem is the air-to-air threat. Put simply, many forget that one of the purposes of gaining air superiority is to keep the enemy air off the backs of friendly ground forces. The U.S. Army has not had to worry about enemy air since 1942, and at that time the army commanders found the situation intolerable. Gaining air superiority does not just allow the air forces of NATO to fight the air portion of the war, it removes hostile air from interfering with friendly ground and allows friendly air to interfere with hostile ground forces.

That is the relevant purpose of counterair, both counter-SAM and air-to-air in the land/air context. It is also a principle well recognized by the NATO air forces collectively.³¹

IN summary, I think that the Europeans, should their approach not work, will not have the ability to operate as we, the USAF, desire to operate. The converse is not true. If the "U.S. approach," as Canby calls it, does not work, the adjustment to the RAF tactical style (as seen by Canby) is a relatively easy one to make, provided one's pilots are in fact trained at low-level flying. (Even if they are not, can one say the attrition rates would be higher after making the switch? Probably not, although effectiveness would suffer.) No new equipment needs to be bought. If, on the other hand, the RAF approach proves highly attritive and additional SEAD is needed, where does it come from? Specialized assets, more complex self-protection jamming pods, and warning equipment must be ordered, procured, shipped, and installed. This cannot be done overnight. But, as it stands now, the enemy must plan on both approaches' being used if he is to commit aggression against NATO and must arrange his air defenses accordingly to protect himself against counter action. Both the RAF and the USAF believe in air power.³²

In addition, if it were known that all NATO air forces were committed to low-level penetrations, a very effective physical and psychological counter is fairly easily available—balloons. Likewise, Canby's discussion of the USAF "task-force" approach is misleading.³³ A more correct formulation would be that while the USAF might prefer sending large numbers of aircraft (24-40) at medium altitudes to deep targets at the same time and in formation, we realize that such is not overly practical until the SAM defenses are overcome. But there are other

ways to achieve the same effect desired (the concentration of force). This alternate method is to time-sequence small groups of aircraft so that they arrive, via different routes, over the target area at nearly the same time, thereby saturating the defenses, lowering attrition, and hopefully maintaining tactical surprise. If one were a believer in the most difficult needing the most work, the USAF or someone in NATO should practice leading and coordinating both means of getting large numbers of aircraft to a target. Almost anybody with a knowledge of low-level flying and of the specific aircraft being flown can take a two-ship to a target. But it takes considerable planning, thought, and leadership to do the same thing with a 24-ship flight, even if they do not all occupy the same air space at the same time.³⁴ Again, the enemy must be prepared for both.

Of course, both Canby and I could be correct. NATO doctrine is probably converging on one level and diverging on others. The situation may be very similar to World War II. Both the United States Army Air Forces and the Royal Air Force agreed on the doctrinal principle and decisive importance of strategic bombardment. But they violently disagreed on the tactic of whether to do it by area or precision bombardment. This fortunate disagreement led to both daylight and night operations against Hitler's Germany, forcing around-the-clock defense and degradation of the defenses against each individual air force. Likewise, what we are seeing in NATO is the development of commonly agreed on doctrine on how best to apply air power in the defense of NATO. The force structure we see today is the result of doctrine held eight to ten years ago. The tactics we see today are the result of attempting to maximize the efficiency and survivability of the force structure that we possess now and with which we must fight, if called on to do so.

The bottom line is not that "the result has

been a breakdown in common alliance procedures and much controversy."³⁵ Rather, since no common alliance-wide procedures existed, we are finally arriving at some common doctrine and procedures, explicitly thought out, discussed, and adopted. The issues are starting to break along lines quite familiar to Americans: air views versus ground views. Controversy will remain, but,

hopefully, such controversy will lead to increased awareness of commonly held air doctrine, common efforts to solve the problems of modern warfare, continued convergence of doctrinal views within NATO, and, most important, an improved capability of NATO air to resist and defeat aggression.

Hq USAF/XOXLD
Washington, D. C.

Notes

1. Dr. Steven L. Canby, "Tactical Air Power in Armored Warfare: The Divergence within NATO," *Air University Review*, May-June 1979, pp. 2-22.
2. Edward N. Luttwak, "The American Style of Warfare and the Military Balance," *Air Force Magazine*, August 1979, pp. 86-88.
3. Irritatingly, some errors are of level of analysis; some are of fact. A minor example: F-4 fighter aircraft can be employed in elements of two, but Canby implies that they cannot, and will not, be so employed. See Canby, p. 16.
4. Luttwak, p. 88.
5. The author has dealt with both Canby and Luttwak professionally. Nothing in this article should be taken as a personal attack on them. I respect their expertise, academic standing, and training as military land force personnel. I just do not agree with their views. For a more obvious misunderstanding or disagreement with an air viewpoint, see Lieutenant Colonel Steven L. Canby (USAR), "The Interdiction Mission—An Overview," *Military Review*, July 1979.
6. Canby, p. 12.
7. Hq USAF/XOXL letter, dated 10 Sep 79, subject: "Service Subscription, STANAGs 3700TA, 3703TA, and 3736TA."
8. These initiatives are conducted under the auspices of the Military Agency for Standardization (MAS) Air Board. The ATP 44, *Electronic Warfare in Air Operations*, drafting committee was unusual in that the committee was made up of national delegations and NATO command representatives. Drafting committees to deal with ATPs are normally composed solely of national delegations. See ATP 44 Drafting Committee Report, 7 Sep 79. Copies on file at Hq NATO, MAS Air Board, and in Hq USAF/XOXLD.
9. Canby, pp. 13-14.
10. SEAD is the agreed on NATO term for "defense suppression." There are slight variations in the definitions at present, but the definition submitted for inclusion in AAP-6, *NATO Glossary of Terms and Definitions for Military Use* is: "that activity which neutralizes, destroys, or temporarily degrades enemy air defense systems in a specific area by using physical attack and/or electronic warfare." See also Hq NATO, ATP 42, *Counter Air Operations*, Ratification Draft, n.d., p. 5-2.
11. One suspects that a technical factor may have more effect on survivability in this regime than going lower—the amount of smoke produced by jet engines makes, for some, a very great task of maintaining tactical surprise. If the enemy can see the aircraft, the enemy gunner can normally get the line of fire in front of it.
12. Canby, p. 20, note 5.
13. Not that this historical fact is without benefit, for there are several important factors to be considered. NATO still works on the principle of national resupply. The logistics system is thus more efficient, given the lack of standardization among air forces and armies. Language problems are lessened, and the geographical proximity of bases allows for the joint solution of many personnel problems. The level at which one views the problem becomes tremendously important when considering these things. The principle stands, however,

NATO is now striving to find ways to fight as a true combined command.

14. See Hq NATO, ATP 27(B), *Offensive Air Support Operations*, Annex F, "Detailed Procedures for Forward Air Controllers" for details. These procedures were drafted by a drafting committee with American, British, and German air and land representation and, subsequently, confirmed by a panel composed of representatives from all NATO nations. The U.S. has ratified the document and agreed to incorporate all of the procedures into national use.

15. Canby, p. 19. Canby is inconsistent here, as cross reference to the article cited in note 5 will show. In that article, he places airfields into the interdiction category.

16. That is, the destruction does not enter in except in the negative sense of making it easier for the friendly force to win, harder to lose. The ground commander cannot verify this except in hindsight, subject to subjective rather than objective evaluation.

17. Steven L. Canby, *A Comparative Assessment of the NATO Corps Battle* (Washington, D.C.: C & L Associates, Inc., 24 November 1978); Luttwak, op. cit.; see also Canby's critique of "forward defense" in "The Alliance and Europe: Part IV: Military Doctrine and Technology," *Adelphi Papers*, No. 109 (London: International Institute for Strategic Studies, Winter 1974/1975).

18. Ground commanders always seem to want control of all assets bearing on their battle, which is a natural tendency. It is difficult to get enough assets, let alone all that one wants. This fundamental difference in perception between land trained and air trained does not seem to go away with nationality or rank—until one is responsible, perhaps, for an "echelon above the corps" when the flexibility of air as an independent arm becomes more obvious and useful. See General William W. Momyer, *Air Power in Three Wars* (Washington, D.C.: U.S. Government Printing Office, 1978), pp. 39-62. The problems have not been solved within the U.S. or British structure nor, does one suspect, within the German structure. Peacetime accommodations have been arranged, however. In ATP 33 and its successor, ATP 33(A), NATO with the national agreement of all members, has opted for the air view, that is, centralized control at the highest practical level and decentralized execution of tasks. Part of the problem is, of course, that we study and think in terms of the corps commander's battle or the division commander's battles—but air is really to be applied against the theater commander's war. The two are not necessarily synonymous in time or place.

19. For an early modern view of BAI and its immediate "father," see Major General Leslie W. Bray, Jr., USAF (Ret), "Tactical Counterforce," *Air Force Magazine*, June 1974, pp. 36-40.

20. Colonel Bruce L. Brown, USAF, Lieutenant Colonel Thomas A. Cardwell III, USAF, and Major D. J. Alberts, USAF, "Battlefield Air Interdiction," *Doctrine Information Publication (DIP) No. 7* (Washington, D.C.: Hq USAF/XOXLD, 11 June 1979), p. 1.

21. The Vietnam perspective, i.e., which is not the same as the classic formulation of interdiction. Many army officers in particular have come away from Vietnam with the perception that interdiction operates hundreds of miles from their battle and has little relevance

to the day-to-day functioning of the soldier in the field. This mind-set must also be reckoned with, for it interferes with communication. The air efforts against North Vietnam that properly can be called interdiction were those directed against the supply lines, but one must remember that the pace of using the supplies was up to the enemy, as it normally is in a guerrilla strategy. Conventional war with heavy use of armor and other mechanized machines is a different form of warfare, and the effects of interdiction are likewise to be evaluated and planned differently.

22. It is difficult to put a number on this time period, for it depends on the enemy's pace and rate of advance as much as anything else. If air is completely successful, of course, the contribution will never be seen in that the enemy forces concerned (as targets) will never enter into the battle.

23. Actually, air power is applicable as firepower on the friendly side of the FLOT as well, particularly if the enemy breaks through. FLOT is used rather than forward edge of the battle area (FEBA) simply because it is a more distinct separation of where the friendlies are versus where the enemy forces are. The thing that separates BAI from CAS in the area of the immediate battle zone is the proximity of friendly troops, the relationship between the enemy's spatial position and the ongoing battle, and the degree of coordination and control necessary to prevent "friendly fire" casualties. The dividing line is not the fire support coordination line (FSCL), as many mistakenly believe. See ATP 27(B), *Offensive Air Support Operations*, Chapter 2.

24. Luttwak, p. 88. Emphasis in original.

25. CINCENT is the Commander in Chief, Central Europe. COMAAFCE is the Commander, Allied Air Forces Central Europe. In U.S. terms, COMAAFCE is the air component commander for the Central Region. There is no ground component commander, as such. Rather, the chain of command passes directly from CINCENT to two army group commanders, COMNORTHAG is Commander, Northern Army Group and COMCENT or Commander Central Army Group. The eight national/NATO corps in the Central Region are divided into, and thus part of, these two army groups.

26. Admittedly, the Allied Tactical Air Force (ATAF) headquarters do not like this very much. But, under the thrust of rationalization, standardization, and interoperability, these headquarters are losing their national identities and becoming NATO organizations. Canby's presentation of the command and control problems involved is terribly simplistic and often misses what are nuances in the use of the word control.

27. What Luttwak has done is ascribe the intent of the RAF attack to that of the USAF in his examples. In reality, the USAF example is

dedicated to counterair, only a part of the total effort. The question really is, how much SEAD is necessary to allow effective BAI across the front?

28. The case of 1967 can be used as proof that it is important to wage counterair in its own right for the psychological effect on the losing side. For the doubters, one might ask how many allied troops occupied the home islands of Japan before the Japanese unconditionally surrendered.

29. Not necessarily because it is "right" or efficient but rather because the duly constituted authority, the theater commander, ordered it after receiving the advice of his subordinate commanders (and probably political direction as well).

30. Luttwak, p. 88.

31. See ATP 33(A), *Tactical Air Doctrine*, and ATP 42, *Counter Air Operations*.

32. Canby gives one the impression that the RAF does not believe in the use of electromagnetic assets to defeat the SAM threat. Nothing could be further from the truth. The British are heavy into self-protection aircraft jamming and radar warning. The real difference occurs on what might be termed the "macro" level, that is, the degree of specialization necessary to defeat the threat and the degree to which the threat must be defeated in order to operate successfully. To be somewhat chauvinistic, the empirical data would seem to be on the USAF side, as the only NATO force to have faced SAMs in combat.

33. Canby, pp. 16-17. Canby describes what the fighter pilots like to call a "mass gaggle." He points out that this type of formation approach is perhaps suitable only for "deep penetration," but implies that it is the USAF approach for all air operations. Again, the implication is simply incorrect. The alternate approach is more sophisticated and requires extensive preflight planning and coordination. It also needs central direction to ensure sufficient assets are dedicated to the task. The British face the same problem of ensuring sufficient resource application. The foreseen needs between 2ATAF and 4ATAF are not necessarily the same, if the tactical situation obtaining in the two general areas is different. We suspect that the tactical situations will be different.

34. The First Preliminary Draft of ATP 44, *Electronic Warfare in Air Operations* shows: "Tactics will include high-speed, low-level flight, routing to avoid enemy air defense concentrations and saturation of enemy defenses by time compression of air activity. Attack aircraft operating at medium altitude will probably require support jamming by specialist EW aircraft or escort by Wild Weasel aircraft." Saturation and time compression require more than two aircraft.

35. Canby, p. 5.

A RESPONSE

MAJOR PRICE T. BINGHAM

MAJOR Donald J. Alberts, USAF, has accurately summarized the evolution of NATO's air doctrine. His clarifications of misleading statements by Dr. Steven L. Canby and Dr. Edward N. Luttwak are well taken. As Major Alberts notes, a difference in perspective has caused a certain amount

of disagreement concerning the proper application of air power between air and land warfare enthusiasts. Unfortunately, despite the USAF's appreciation of the increasing threat to NATO, reflected in the more integrated air doctrine, extremely serious flaws in this doctrine still exist. It is the difference in perspective mentioned by Alberts as well as an inability to fully comprehend historical lessons that have allowed U.S. leadership to develop serious misconceptions and a fatally flawed doctrine.

Present U.S. strategy and air doctrine

make two dangerous assumptions. The United States has been too quick to dismiss the factor of surprise. History has made it abundantly and painfully clear that surprise can be achieved. Surprise, history teaches, is usually not achieved because there are no indicators of impending attack, but rather because for various reasons, responsible political or military leadership chooses to ignore these warnings. Yet the U.S. has decided that we are not subject to this human failing. This dangerous decision has led to the fatal assumption that the U.S. will have time to reinforce its European-based land and air forces adequately and, thus, be able to preserve the integrity of NATO.

It is a harsh fact that individuals and institutions often do not learn except by personal experience. This is particularly true when the lesson taught by someone else's experience is in conflict with one's own closely held, but untested beliefs. Many U.S. admirals failed to appreciate air power until after Pearl Harbor. Likewise, U.S. Air Corps leadership was slow to see the threat to bombers from fighters, despite RAF experience.

The U.S. Army, since 1943, has not been seriously threatened by enemy air power. As a result, until very recently too little emphasis was placed on air defense. Recent experience in Southeast Asia (SEA) and Korea has also fostered unrealistic expectations concerning the degree of air support the army will receive in a European war.

Yet the U.S. Army is not alone in being unduly influenced by recent experience that may have taught the wrong lessons for the European theater. The U.S. Air Force has not faced an enemy with significant capabilities since World War II. During Korea and SEA, the U.S. possessed both time and a relative abundance of air assets. The major restriction to the ideal application of our air power resources was not enemy capabilities but self-imposed political constraints. As a result, like the U.S. Army, the USAF has

failed fully to appreciate the nature of the threat to NATO.

For a time after our experience in SEA, the USAF placed heavy reliance on the ability to use high and medium altitudes in a European scenario. One example of this thinking was the concept of supplying air support during darkness or poor weather by medium-altitude beacon bombing. However, recently the USAF has become more realistic. The more united approach to doctrine is one example. Particularly significant is current USAF training, such as Red Flag, demonstrating that the importance of safety has finally been placed in proper perspective.

But despite these improvements there still seems to be a certain amount of wishful thinking in regard to doctrine at command level. The proper use of air power as outlined by Major Alberts may be ideal, but doctrine must also address reality in order to avoid dangerous misconceptions. Major Alberts is optimistic if he thinks NATO commanders would have the luxury of being able to employ a significant portion of their assets in a counterair and interdiction campaign.

The USAF must realize that if NATO does not win the first battle, there may be no opportunity for a second battle. The politically mandated forward defense strategy does not allow NATO commanders the opportunity to use maneuver in a defense in depth, trading territory for time. At the same time, this political leadership has been unwilling to provide the forces to make their mandated strategy work.

Without even considering the probability of chemical, biological, and radiological warfare, NATO would soon find itself in a position similar to that of France in 1940 or Israel on the Syrian border in 1973. In both of these situations, each nation realized that if the enemy was able to penetrate the forward defenses, the results would be catastrophic. Israel in 1973 and, to a degree, the

U.S. in Vietnam in 1972 were forced to substitute air power for lack of adequate ground forces. The attrition from such an air battle in Europe, plus the relative vulnerability of NATO airfields, could easily result in the destruction of NATO's air forces.

The threat to NATO is too severe for nations or military services to entertain paro-

chial views. Doctrine that ignores the lessons of history is fatally flawed.

Holloman AFB, New Mexico

Major Price T. Bingham (B.S., USAFA) is an instructor pilot, flight commander, 434th Tactical Fighter Training Squadron (TAC), Holloman Air Force Base, New Mexico.

A RESPONSE

LIEUTENANT COLONEL OWEN H. WORMSER

I HAVE read with considerable interest the articles by Dr. Steven L. Canby (*Air University Review*, May-June 1979) and Dr. Edward N. Luttwak (*Air Force Magazine*, August 1979). Their views, I find, do not portray the present tactical air power capabilities of Allied Air Forces, Central Europe (AAFCE), however.

Major Donald Alberts's long but thought-provoking article in this issue of the *Review*, states the case well:

First, and perhaps foremost, air power's role is *not just* to help in the land battle, rather it is to help win the war—the total battle—and achieve the military environment necessary for the attainment of NATO political goals.

I contend that the USAF is acutely aware of limitations to force effectiveness in NATO. I agree with Major Alberts when he states: "it is not a question of attrition versus maneuver, but rather a question of a targeting scheme designed to produce primarily attrition or primarily disruption through selective destruction." I would go the obvious step farther and say "or a mixture of both." The fundamental point, ignored it seems by both Canby and Luttwak, is the fact that air power is synonymous with

maneuver. Said another way, the speed, range, and weapons effects of modern air power provide for flexible employment options at orders of magnitude greater than similar opportunities for the ground forces.

This inherent flexibility is the centerfold of the ongoing NATO debates on the future application of its tactical air arm. It is not, as Canby and Luttwak contend, so much a set of differences and quarrels over the doctrine for using air power resources but, rather, mature and well-thought-out differences about the tactics to be used. Thus, if current doctrine has consensus support in AAFCE (and I contend it does), yet a multiple of national tactics exist within the various tactical air units under AAFCE, the debate centers correctly on common procedures. I believe this is as it should be. Should NATO press all its air units into a single tactical employment mold—all behaving as a clone from a chosen set of tactics—the resulting advantage to the Warsaw Pact is obvious. I believe it would be most useful if authors such as Drs. Canby, Luttwak et al., could lend their expertise to the "procedures debate," leaving the precise tactics to be developed by those closest to the problem.

In my opinion the procedures debate needs all the help it can get because there is so much to be gained and yet so much at risk if we fail to integrate our warfighting systems into a manageable, efficient, and effective fighting machine.

It appears to me that Drs. Canby and Luttwak would have us adopt a form of static warfare or at a minimum, replace what they argue to be a set of static assumptions with another. In reality, NATO has rejected the "set piece" doctrine of the MC 14/2 era and has within its MC 14/3 strategy of flexible response and its current doctrinal precepts sufficient elasticity to bring more warfighting options to bear than the Warsaw Pact can tolerate.

For in the final analysis, maneuver is not simple movement; rather, it includes movement to make changes in position—time and space—establishing practical advan-

tages. Concepts that undergird maneuver strategies ultimately involve dexterous physical management of forces, artful design, and adroit manipulation of scarce resources.

I believe NATO is using its skill and available tools to mold its resources into an effective maneuver force through its ongoing procedures debate.

*Hq USAF/CVAR
Washington, D.C.*

Lieutenant Colonel Owen H. Wormser, USAF, is Executive Assistant, Readiness/NATO Staff Group, Vice Chief of Staff Office, Hq USAF. Colonel Wormser is currently attending the National War College, from which he will return to the Readiness/NATO Staff Group.

An Archival Request

The National Archives and Records Service (NARS) is seeking machine-readable data files (computer data bases) concerning any phase of the war in Southeast Asia (1965-73). NARS has already accessioned some 50 data files and wants to increase its collection. The following subjects are especially desired: psychological operations, logistics, the war at sea, and the war in the air; but any subject will be considered and negotiations handled through proper channels.

Readers having knowledge of any such files should contact: Machine-Readable Archives Division (NNR), The National Archives, Washington, D.C. 20408, attention Donald Harrison; or call (202) 724-1080 (centrex).

air force review

FROM THEORY TO ACTION

implementing job enrichment in the Air Force

LIEUTENANT COLONEL DENIS D. UMSTOT
LIEUTENANT COLONEL WILLIAM E. ROSENBACH

WHAT do employees want in their jobs? Most Air Force people seem to be looking for meaningful, interesting, challenging jobs. A recent Air Force Quality of Working Life Survey supports this assertion — most people who were dissatisfied with their jobs found them to be boring and unchallenging. How, then, can we improve these boring jobs? One workable strategy is through job enrichment, a management process that focuses on the *job itself* with the goals of making it more interesting and meaningful and increasing job challenge and responsibility. This article presents some new developments in job enrichment theory and then moves from theory to action, describing several alternative processes for implementing job enrichment in Air Force organizations, including a “self-help” strategy for managers.

historical perspective

Job enrichment certainly is not new; it was first used back in the 1940s at IBM. During



the '50s there was a slow growth in the number of industrial organizations interested in applying job enrichment. However, the impetus that really generated widespread interest and acceptance was Frederick Herzberg's Motivation-Hygiene theory.¹ Herzberg's theory provided a relatively easy to understand, intuitively appealing approach to redesigning jobs. Several successful and widely publicized experiments using Herzberg's approach led to increased interest in job enrichment in both the private and public sector.²

Job enrichment in the Air Force began in 1974 with a series of pilot projects at the Ogden Air Logistics Center under Herzberg's guidance. Results of these projects were so successful that job enrichment was expanded to all air logistics centers.³ As of early 1979 Air Force Logistics Command (AFLC) had 376 job enrichment projects under way.

Job enrichment in the Air Force has not been limited to the civilian work force of AFLC. In 1975, a job enrichment project was completed with security specialists at a northern Strategic Air Command base. Results were encouraging—job satisfaction, satisfaction with supervision, and attendance improved when compared to a group that did not receive job enrichment. In 1976, another set of enrichment projects was initiated in a Tactical Air Command transportation squadron; the jobs of vehicle maintenance mechanics, vehicle operations specialists, and air freight personnel were enriched. Again, the results showed some significant morale improvements although the gains were not spectacular.⁴ Based on these experiments, a decision was made in August 1977 to develop a program that would make a job enrichment capability available to commanders and managers throughout the Air Force. During 1978, 17 job enrichment managers (six from the major commands and eleven from the Air Training Command Leadership and Man-

agement Development Center) were trained by the authors. By late 1978, a trained cadre of Air Force job enrichment managers was available to assist major command job enrichment managers who wanted to conduct projects.

*new directions
in job enrichment theory*

Although Herzberg's Motivation-Hygiene theory is very useful as a framework for job enrichment, a more recent model developed by J. Richard Hackman and Greg Oldham⁵ may be even more useful to Air Force managers. Whereas Herzberg focuses on such general factors as achievement, recognition for achievement, responsibility, advancement, and growth, Hackman and Oldham concentrate on specific factors that are an integral part of the job itself. Although Herzberg's theory is more general than Hackman and Oldham's, the implementing concepts or "ingredients of a good job" tend to make the actual application of on the job enrichment quite specific. In fact, the implementing concepts are similar regardless of which theory is used.⁶ They assert that an enriched job is relatively high in skill variety, task identity (a whole and complete piece of work), task significance, autonomy, and feedback from the job. (See Table I for definitions of these terms.) They also predict that when jobs are high in these characteristics most people will experience a sense of meaningfulness, responsibility for work outcomes, and knowledge of results of their work activities. Thus, the end result is predicted to be higher job satisfaction, lower absenteeism, lower turnover, and higher internal work motivation.

An additional characteristic that we added to the model is goal clarity. When people have clear, moderately difficult goals, they experience a clarity of expectations and sense of challenge that result in both higher performance and improved at-

Skill variety	Doing different things; using different valued skills, abilities, and talents.
Task identity	Doing a complete job from beginning to end, the whole job rather than bits and pieces.
Task significance	The degree of meaningful impact the job has on others; the importance of the job.
Autonomy	Freedom to do the work as one sees fit; discretion in scheduling, decision-making, and means for accomplishing a job.
Feedback	Clear and direct information about job outcomes or performance.
Goal clarity	Knowing and understanding what specific objectives or goals apply to the job and their relative priorities.

Table 1. What makes a motivating job?

titudes.⁷ Figure 1 illustrates the model of job enrichment that is being used for Air Force combat support enrichment efforts.

implementing job enrichment

How do we put the theory into action? A fault of many management theories is that although they sound good on paper they seldom get implemented. There are a number of concepts or ideas that should be considered when jobs are redesigned. Not all of these concepts are required to redesign a job successfully, but when they are all optimally balanced, the result will be a truly enriched job.

Remove unnecessary controls. In military organizations one often finds a proliferation of reporting, control, and inspection systems. A close inspection of these systems often reveals duplication or obsolete controls that frustrate employees and hamper performance. A philosophy of standardization contradicts this implementing concept. Managers who demand standard, detailed

procedures often find they must also have control systems to ensure that those procedures are followed, thus frustrating the employee and causing unnecessary organizational overhead. On the other hand, decentralization provides personnel with a sense of responsibility for the work outcomes rather than compliance with procedures. Removing unnecessary controls facilitates a feeling of autonomy on the part of an individual performing a job.

An example of this implementing concept occurred in a security police squadron when it was decided that it was not necessary for an NCO to observe patrolmen or security specialists clear their weapons—anyone qualified on the weapon would be allowed to fulfill that safety requirement. Another simple but powerful strategy is to let people sign their own correspondence. It not only provides the employee with more responsibility, autonomy, and direct feedback but also frees higher level managers from the task of checking and signing mundane correspondence.

Combine tasks. If tasks are combined in a logical and meaningful manner, task identity and skill variety will be improved. Thus, people performing the work will experience a feeling of doing a whole, complete, and meaningful job. An example of this concept occurred in a vehicle maintenance organization when mechanics were allowed to complete an entire work order on a vehicle rather than doing just one task and passing it on to another mechanic. The major thrust of combining tasks should be to put all meaningful functions or tasks together into one job so that a person does a complete job from beginning to end and has responsibility for all the work activities associated with the job. Managers should avoid the all-too-common strategy of fragmenting responsibility into specialized subfunctions.

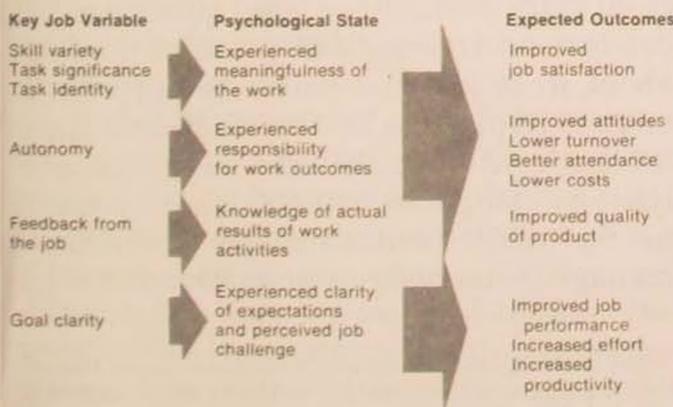
Establish client relationships. The goal of this concept is to form a direct personal contact between the employee and the customer, user, or client for his or her product or service. If work activities are organized around customers rather than functions, employees will experience a sense of ownership and responsibility for the well-being of the client. In addition, feedback and im-

proved communication are facilitated, responsibilities are pinpointed, and employees feel a sense of identity with the user's mission. An example of establishing client relationships occurred in an Air Force word processing center. Machine operators were not allowed to deal directly with authors whose correspondence they were typing; all communications were routed through the supervisor. In addition, operators never seemed to work for the same author twice, for when work arrived, it was assigned to the first available operator. After the job enrichment project was begun, operators were assigned total responsibility for taking care of a division's word processing needs. Operators dealt directly with clients and developed a sense of ownership and responsibility for the clients' work.

Schedule own work. This concept allows workers to control their own schedules for doing their work. It includes ordering the sequence of their work, determining when to take breaks, selecting shift assignments, and even choosing their own starting and quitting times on a day-to-day basis within certain constraints using flexitime concepts.⁸ Air Force organizations that have adopted flexitime report positive results. Allowing employees to schedule their own work improves autonomy and individual responsibility. By making individual workers responsible for their schedules, people become more concerned with getting the job done and less concerned with watching the clock.

Plan and control own work. This concept focuses on allowing workers to plan their own work activities. If possible, they should be allowed to plan for and control their own resources (funds, supplies, and equipment). Employees should also be encouraged to provide input to all decisions that affect their jobs; after all, they are usually in the best position to provide meaningful input. Control over activities associated with their jobs creates a sense of individual responsibility and provides meaningful feedback.

Figure 1. A model for an enriched job*



*Based in part on Hackman, Oldham, Janson, and Purdy, "A New Strategy for Job Enrichment," *California Management Review*, Summer 1975.

Examples of this implementing concept are providing individuals with their own budgets for supplies on TDY or allowing people to order and store their own supplies. Another frequently used technique is to allow workers to be responsible for their own quality control. A final strategy is to establish clear goals and expectations and then let the individual employee plan and control the means to reach the goal or objective.

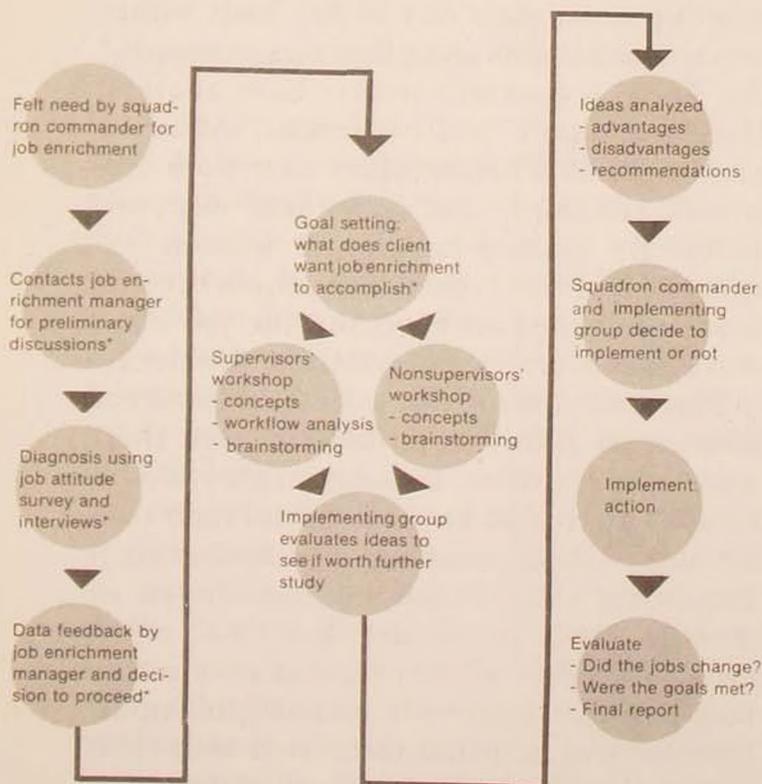
a job enrichment implementing process

The cornerstone of the job enrichment process is that it is the client's program. All activities are directed by the principle that the client owns and controls the effort. The job enrichment manager is an expert in the

process of gathering data, conducting workshops, problem-solving techniques, goal setting, etc.; however, the job enrichment manager is *not* an expert in the client's job or organization. A diagram of the job enrichment process is shown in Figure 2. Rather than explain the diagram in detail, perhaps a more meaningful way to understand it is to relate a hypothetical example of how job enrichment might proceed in a typical Air Force unit.

The commander of the 999th Security Police Squadron at Coldwater AFB had heard of job enrichment in Squadron Officer School and Air Command and Staff College, but only recently did he realize that he could actually do a job enrichment project in his own organization. His first step in initiating the project was to call the major command job enrichment manager⁹ to find out if job enrichment might help solve some of his rather considerable morale problems. After lengthy telephone discussions, they jointly agreed that it looks as if job enrichment might be appropriate. The major command job enrichment manager schedules a visit to the base for a face-to-face meeting and discussion with the client—and, if jointly agreed, administers a job attitude questionnaire to aid in diagnosis. The job enrichment manager, who may be accompanied by one or two additional job enrichment managers from the Leadership and Management Development Center (LMDC),* administers the questionnaire, conducts interviews, and provides briefings about what job enrichment is and what it takes to implement it. The diagnostic phase is completed when the data have been analyzed by computers at LMDC and returned to the major command job enrichment manager, who makes a determination if job

Figure 2. The job enrichment consulting process



*At these stages the squadron commander or the job enrichment manager can decide not to proceed.

*The Leadership and Management Development Center, Maxwell AFB, Alabama, is the center for job enrichment consulting services and information. They have a number of people trained in the consulting process described in this article. For more information contact LMDC.

enrichment is appropriate for the 999th. If the diagnosis shows that job enrichment has potential, the job enrichment manager calls the client, provides preliminary diagnostic information, and, if the client still wants job enrichment, sets up a tentative schedule for the workshops.

The first step after the job enrichment team arrives is to brief the commander and his key staff on the results of the survey. Although the commander has probably made up his mind to proceed, the project can still be canceled at this point. In addition, a goal-setting exercise is conducted to help the client formalize what is wanted and expected from job enrichment. The next step is to conduct one three-hour workshop with the commander and his key supervisors and another workshop with about 20 working-level people. The workshops provide about one hour on theory and implementing concepts. The supervisory group also develops a workflow diagram if that seems appropriate. The purpose of the theory and concepts training is to prepare people to participate in a structured, one-hour brainstorming session that seeks to find out "ways in which we might enrich the jobs of 999th security specialists."

After the brainstorming, the job enrichment managers take the ideas (perhaps as many as 400) that have been generated from the two sessions and sort them into job enrichment-related ideas and nonjob enrichment-related ideas. The managers then meet with the commander and his key staff (implementing group) for from 6 to 12 hours during a two-day period, to evaluate the ideas and determine which ones are worth studying for possible implementation. At this meeting each job enrichment idea is discussed, and, if warranted, an action person and due date are assigned by the commander for reporting to the implementing group. The job enrichment manager's role during the evaluation session is that of a facilitator to the commander: assistance in

recording, consensus-reaching, conflict resolution, and communications may or may not be needed. Typically the commander takes over and leads the session after the first few hours. When all promising job enrichment ideas have been evaluated and assigned to someone for research and possible action, the job enrichment manager's work is mostly done; however, the commander must continue to monitor the idea evaluation and implementation until every idea has been researched and a decision made on implementation. This may take two to three hours a week for over several months.

The final stage of job enrichment is evaluation. The job enrichment managers return to the unit about six months later, administer a post-test questionnaire, and provide feedback to the commander about changes in attitudes. In addition, the commander's goals for the job enrichment project will be jointly examined to see if job enrichment accomplished what was wanted. A final report is then prepared by the client and the job enrichment manager through normal command channels. This report provides the client's evaluation of the job enrichment effort and the measurable outcome of the project.

other implementing strategies

Micro vs. macro job enrichment. The process we have been describing is aimed at the functional supervisor or unit commander as the client—it is a micro approach. Bigger payoffs and leverage may be gained by taking a macro approach. In the macro approach a whole functional area (such as missile crews, aerial ports, C-141 aircrews, etc.) would be tackled with the major command or Air Staff functional managers as the client. The same basic process could be used by getting key supervisors' and workers' ideas from base level as input into the evaluation process. Macro job enrichment is more difficult than micro job enrichment

because of the politics and systems interdependencies, but if it is carefully done, there is potential for large payoffs with very low costs.

The manager as the job enrichment initiator. All managers are job designers.

Every time a supervisor assigns work, gives instructions, or checks to make sure a job is being done, job redesign is happening. Part of the reason for educating our work force is to give people an understanding of basic managerial concepts, such as job enrich-

Table II. A manager's self-help guide to job enrichment

Learn all you can about job enrichment. Read all the references cited in this article. Talk to the major command job enrichment manager or Leadership and Management Development Center. Become an expert in the concepts.

Is job design a problem? Look carefully at the jobs. Are they enriched already? Ask people how they feel about the job itself—perhaps they like it the way it is. Do not rock the boat unnecessarily.

Is there some other problem besides job enrichment? Perhaps supervision, communication, or lack of planning are the real problems.

Ask the employees if they want job enrichment. If it looks like job enrichment is appropriate, then teach them what job enrichment is, what it can do for them and you, and see if they are interested in pursuing it. If not, do not begin an effort until they are ready. One aid to overcoming initial resistance is to make the job enrichment program an "experiment" done on a trial basis.

Establish the goals that you want job enrichment to accomplish. Be sure they are specific and that the end results desired are measurable and time-phased.

Hold a concept workshop with key supervisors and workers away from your unit. Get a room at the NCO club or wing education office or elsewhere so that you will not be interrupted during the workshop. Be sure

that everyone understands job enrichment theory and the implementing concepts.

Brainstorm job enrichment ideas during the workshop. Allow one hour for brainstorming ideas. The purpose of brainstorming is only to generate ideas, not to evaluate.¹⁰ The rule against any form of evaluation or criticism of any idea should be strictly enforced. Another key rule is to avoid "war stories"—you are looking for ideas, large numbers of ideas. During a one-hour brainstorming session, you should have between 100 and 200 ideas. Try to use two recorders, preferably people who are not part of the group, to write the ideas on flipcharts and post the completed pages on the wall.

Pick out the top ten ideas. Have each participant pick his top ten ideas and put them on 3 x 5 cards so that a preliminary cut of the important ideas has been made. (Number all the ideas on the flipcharts to make the process easier.)

Sort and categorize the ideas into some meaningful sets for discussion and analysis.

Analyze the ideas. If they have merit, study and implement them. If not, discard them. (Be sure to provide feedback to the participants of the session about the ideas that were discarded or disapproved.)

Implement the ideas.

Evaluate the job enrichment effort. Did the jobs change? Were your goals met? What improvements resulted?

ment, so they will change their everyday management techniques. Unfortunately, most academic programs provide too little information about how to perform job enrichment or any other management strategy. Managers who want to effect job enrichment in their organizations will find Table II useful.

some cautions

It would be unrealistic to assert that job enrichment is easy and simple or a cure for all organizational ills. There is a good deal of hard work involved. Extensive time commitments are needed to evaluate job enrichment ideas and develop implementing plans. It takes a really committed manager to do job enrichment in the midst of the day-to-day organizational crises that seem to abound. Another issue is that unrealistically high expectations on the part of workers can be created. It is best to use a relatively low-key approach and not promise major improvements or changes. Another consideration is the nature of your people. Are they interested in job enrichment? Are

they motivated to support organizational goals? Can you trust them? The receptiveness of your employees is another important consideration. A final caution seems in order. If you are a manager who wants to be in complete control, to make autocratic decisions, shun consensus, etc., then it is unlikely that a job enrichment strategy aimed at giving people more autonomy and feedback will work. If job enrichment goes against your managerial style or seems inappropriate in your organization, do not use it just to get on the bandwagon.

JOB enrichment consistently improves morale in terms of job satisfaction, organizational climate, satisfaction with supervisors, and other measures. Performance, in terms of improvements in quality and cost saving, may also result. Retention of officer and enlisted personnel who possess critical skills can be expected to improve. Thus, the result will be a better motivated, more committed work force that will translate directly into increased organizational effectiveness and readiness.

United States Air Force Academy, Colorado

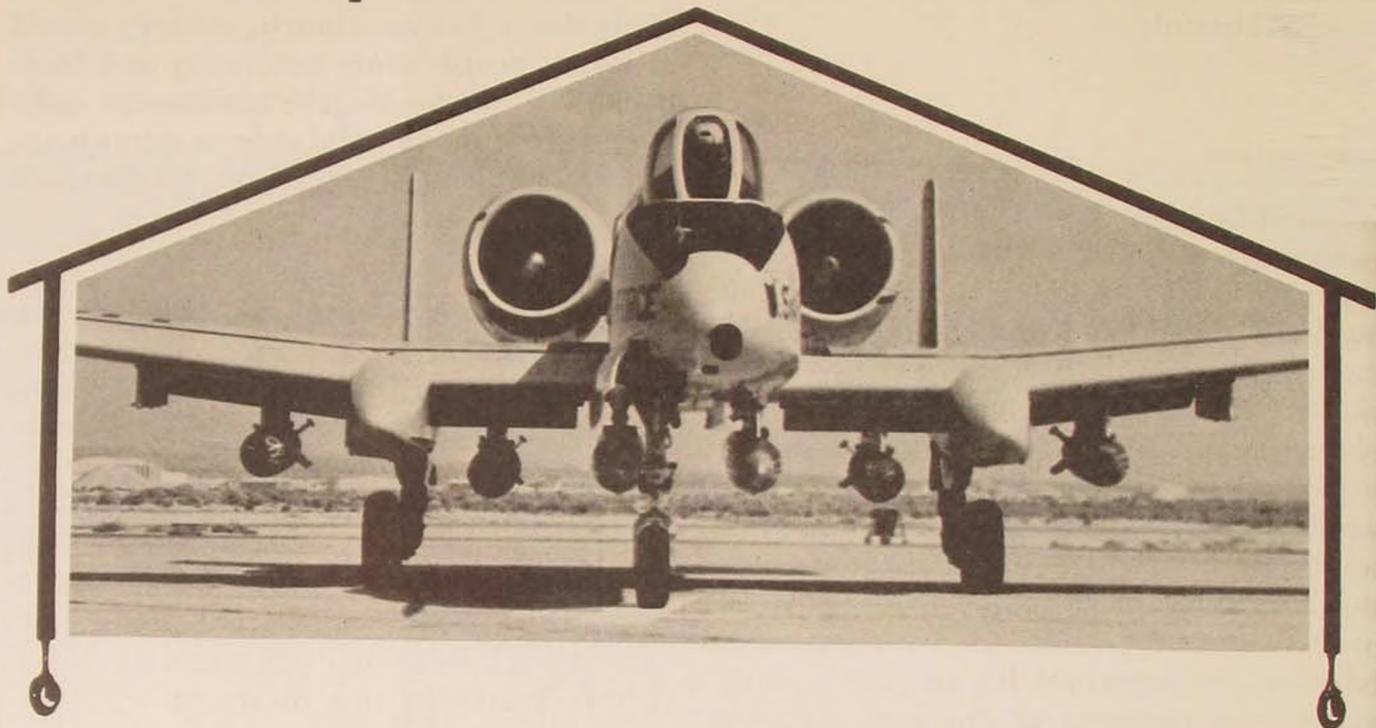
Notes

1. Frederick I. Herzberg, *Work and the Nature of Man* (New York: World Publishing, 1966).
2. See Robert N. Ford, *Motivation through the Work Itself* (New York: American Management Association, 1969); and W. J. Paul, K. B. Robertson, and Frederick Herzberg, "Job Enrichment Pays Off," *Harvard Business Review*, March-April 1969, pp. 61-78.
3. Frederick I. Herzberg, "Orthodox Job Enrichment: A Common Sense Approach to People at Work," *Defense Management Journal*, April 1977, pp. 21-27.
4. The results of these experiments are available from the authors. The series of experiments in the transportation squadron were funded by the Life Sciences Directorate of the Air Force Office of Scientific Research.
5. For a good summary of the Hackman-Oldham approach to job enrichment, see Richard J. Hackman, Greg Oldham, G. R. Janson, and K. Purdy, "A New Strategy for Job Enrichment," *California*

Management Review, Summer 1975, pp. 57-71.

6. For further information on the approach used by AFLC, see Frederick Herzberg, "The Wise Old Turk," *Harvard Business Review*, September-October 1974.
7. Denis D. Umstot, "MBO + Job Enrichment: How to Have Your Cake and Eat It Too," *Management Review*, February 1977, pp. 21-26.
8. See A. O. Elbing, Harmon Gadon, John R. M. Gordon, "Flexible Working Hours: It's about Time," *Harvard Business Review*, January-February 1974.
9. As of early 1979 six commands had job enrichment managers: SAC, TAC, MAC, AFSC, PACAF, and AFCS (in addition to the AFLC program outlined in this article).
10. For detailed information on how to conduct brainstorming sessions see A. F. Osborn, *Applied Imagination: Principles and Procedures of Creative Thinking*, revised edition (New York: Scribner, 1957).

R in my opinion



BASING THE A-10 IN EUROPE

*strategic and mobility
problems*

COLONEL ORIN C. PATTON
MAJOR KENNETH W. ENGLE

THE A-10 is a unique weapon system. It is built with yesterday's technology to meet tomorrow's threat. Representing a significant departure from the Air Force's historic "faster, higher, farther," traditions, this unusual weapon requires a certain reconsideration of fundamentals such as the threat, basing, deployment, and employment.

Colonel Robert D. Rasmussen has presented an excellent commentary on some of these novel implications.¹ He articulated a comprehensive concept for employment and basing that included a wide array of considerations: forward basing, turnaround, tactical employment, allocation of sorties, command control, geography of the battle area, interface with the customer, training, logis-

tics, theater level strategy, and more. This is a particularly useful analysis for the A-10 because of its novelty, but it sets an example that might be instructive for other weapon systems. It is also possible that some of Colonel Rasmussen's arguments might be extended further.

As military professionals, we should first examine the threat. The specifics of any conflict will be dependent on the actual scenario that develops at the time; obviously, airtight predictions cannot be made. A review of Soviet military literature provides one useful insight into provisions of their military doctrine pertinent to a NATO/Warsaw Pact confrontation.

Pact forces may or may not follow their own script. However, a review of the close correspondence between doctrine, force structure, and training exercises suggests we should pay more attention to what they teach themselves. We should not assume they will be inhibited by the same constraints or values we hold; if they were, there would be no need for NATO in the first place. In a society as dedicated to doctrinaire thinking as the Soviets', deeply imbedded doctrines simply cannot be disregarded regardless of the repugnance of those concepts treating volatile questions such as theater nuclear weapons.

Soviet doctrine

The primary conclusion to be drawn from Soviet books and articles translated and published in the USAF "Soviet Military Thought" series and "Soviet Press Selected Translations" is that the Soviet expectation, in the event of crisis and confrontation, is to fight a decisive war in Europe to achieve their objectives. Their strategy is offensive. Their forces are designed and equipped for tactical nuclear weapons to play a leading role if deemed necessary.

Thus, it would appear that the Soviets perceive a reduced possibility of escalation

into a strategic nuclear exchange because of the current balance of strategic forces. This is a change from the early sixties. The achievement of parity in the strategic balance during the late sixties and early seventies has, in their eyes, significantly lowered the risk of escalation and led to a new perspective of the theater environment detached from the general war context. A tactical nuclear exchange, limited to Western and Central Europe, offers three potential advantages to the Soviets that could justify a significant risk: (a) the conquest of Western Europe could be expedited, (b) damage could be restricted, essentially, to non-Soviet areas, thereby (c) leaving much Soviet power intact with reduced threat of Chinese intervention or Warsaw Pact defections.

The most disquieting scenario in Soviet doctrine calls for a surprise "preemptive" attack against the NATO "aggressor." Such an attack would presumably include massive, in-depth theater nuclear strikes accompanied by blitzkrieg air and ground exploitation. Although a war could begin conventionally, the Soviets see escalation to nuclear levels as a logical eventuality. They apparently intend to strike first to destroy NATO nuclear capabilities, main combat forces, and command, control, and communications (C³). This would isolate the battlefield and prepare main attack corridors. The importance they place on surprise calls for using forces in place and giving minimum warning, perhaps only a few hours.

A major nonnuclear war plan in Europe apparently does not appeal to the Soviets unless NATO's nuclear capabilities could be disposed of, e.g., through political actions or conventional attack, because the threat of a NATO theater nuclear initiative would hang over all operations. One possibility, wisely rejected by the Western allies, would be an agreement whereby the parties declared their intention not to be the first to use nuclear weapons. This would expose NATO to the numerically superior conven-

tional forces of the Warsaw Pact, reduce the uncertainties of Pact war planning, and yield only a Soviet assurance of restraint of dubious value.

The now-credible threat of a Soviet-initiated theater nuclear war has an impact on tactical and strategic planning comparable to the achievement of Soviet strategic parity. It is a "new ball game," only more so, because a NATO monopoly on realistic theater nuclear capabilities was a stabilizing deterrent. The reverse is not true. A realistic Soviet theater nuclear threat reduces the risk to the Pact, rather than increasing it. It compounds the potential shock effects of a surprise attack, reduces the likelihood of effective early resistance of NATO forces, and increases the difficulty of effective reinforcement of NATO from North America. Moreover, the impact on the political decisions of noncommitted Western nations is very difficult to anticipate in advance.

How should we counter this Soviet military strategy? What are the basing, mobility, and deployment implications of a highly thinkable theater nuclear war? Our first imperative is to defeat the combined arms forces ground offensive that will attempt to occupy large areas of NATO territory. The initial use of Pact forces in place, to achieve surprise, suggests that a major weakness would be the transportation requirements at second echelon and reserve units. Effective close air support (CAS), as described by Colonel Rasmussen, is imperative to blunt the major thrusts while coordinated NATO interdiction strikes could cause wide-scale disruption of transportation capabilities for secondary forces. Can we deploy and protect our forces for this task?

implications for basing and mobility

Turning our focus back to the basing strategies for the A-10, we note that one of the disturbing characteristics of many discussions of tactical air basing in Central Europe

is the hidden, but apparently implied, assumption of a relatively static battle. Admittedly, we should be able to count on using some of the existing USAF installations, at least for the first few days, unless the Warsaw Pact mounts an extremely successful Pearl Harbor-like surprise attack. But the Soviet nuclear option increases the probabilities and extent of serious base destruction.

How long can we count on fighting from Ramstein, Bitburg, Hahn, or Spangdahlem? What will be the degree of initial battle damage and remaining operational capability? If there is anything resembling a rapidly moving blitzkrieg with concentrated highly mobile armor, one wonders what might be the operational expectancy of our access to Hahn, Bitburg, Sembach, or Rhein-Main. One week? Two weeks? Two months?

NATO is relatively short of airfields now, so we must question where all of the aircraft from U.S. based units will go that will converge on Europe. Current planning must assume availability of virtually all existing fields to absorb the base loading requirements we anticipate. If we make bold assumptions regarding our ability to hold the Pact attack at, or near, the NATO-Pact border and assume only minimal or no early damage to bases, the airfield problem is serious enough. If we accept, alternatively, authoritative forecasts of a rapid Pact armored advance, possibly following a "corridor" cleared of resistance by nuclear attacks, we have an extremely serious issue. If we grant that it may not be wise to leave the surviving F-15, F-16, and A-10 assets exposed to such rapidly moving Soviet armor, we have an even more critical problem of airfield capacity in rear areas. Will we be able usefully to deploy enough air power to Europe and redeploy (where necessary), to play the timely role needed from Tacair? Are we looking at another Dunkirk?

There is, of course, no simple, single answer. As always, it depends on the condi-

tions. France—in or out? Spain and Portugal—in or out? What is the level of battle damage on existing fields? What unique problems did nuclear weapons cause? How well do the antiarmor and Tacair forces operate against the Pact? What kind of weather?

What we need is not, necessarily, a set of pat answers but deployment mobility concepts that can survive both strategic uncertainties and battlefield damage. Colonel Rasmussen's forward A-10 bases, widely scattered, are a healthy partial answer. At present, however, it is not difficult to find work areas on typical bases that offer vulnerable, crucial bottlenecks to operational readiness. Take, for example, the munitions and avionics shops, petroleum, oil, and lubricants, runways, taxiways, etc. We have done a good job of getting aircraft under hardened shelters, but if the readiness of munitions or sensitive avionics depends on quality maintenance, parts or equipment housed in soft unhardened shelters, we may have operationally ready aircraft incapable of flying effective missions for the lack of essential support.

Colonel Rasmussen's concept was based on highly flexible and highly mobile deployment concepts. One would not expect F-15s to be flown from forward operating locations (FOLs), but do we have realistic "re-deployment" concepts for F-15s, F-16s, and A-10s? Do they include reconstitution of battle-damaged critical maintenance and turnaround facilities? Can we rapidly re-deploy an F-15 wing to a base not currently

programmed for F-15s, with the surviving maintenance facilities, and expect it to be fully operational?

IN ANY EVENT, Rasmussen's concepts are headed in a welcome direction. He might have added an additional argument for the FOLs, beyond improved pilot familiarity with the terrain, in the enormous advantage of proximity for the pilot trying to locate a target visually in submarginal weather. We would assume that armored targets will be relatively fleeting in a firepower-heavy environment (concentrating, dispersing, re-concentrating) and that *rapid* reaction for CAS is going to be an absolute "operational necessity," not a "nice-to-have." The local FOL-based A-10 is going to have a much higher probability of being able to stay under the weather, in the marginal conditions so common in Europe, and kill the target quickly than his counterpart tooling in from an FOB several hundred miles away. Further, the very concept of the FOL implies high mobility and flexibility in temporary "basing." This could be useful in the tactical advance as well as in retrograde. If we do not have comparable concepts for all weapon systems in Europe, we need them. The years of emphasis on economies in facility planning and standby maintenance capabilities (spares, back-up equipment, mobility of maintenance operations) may have led us into habits of thinking that we need to correct.

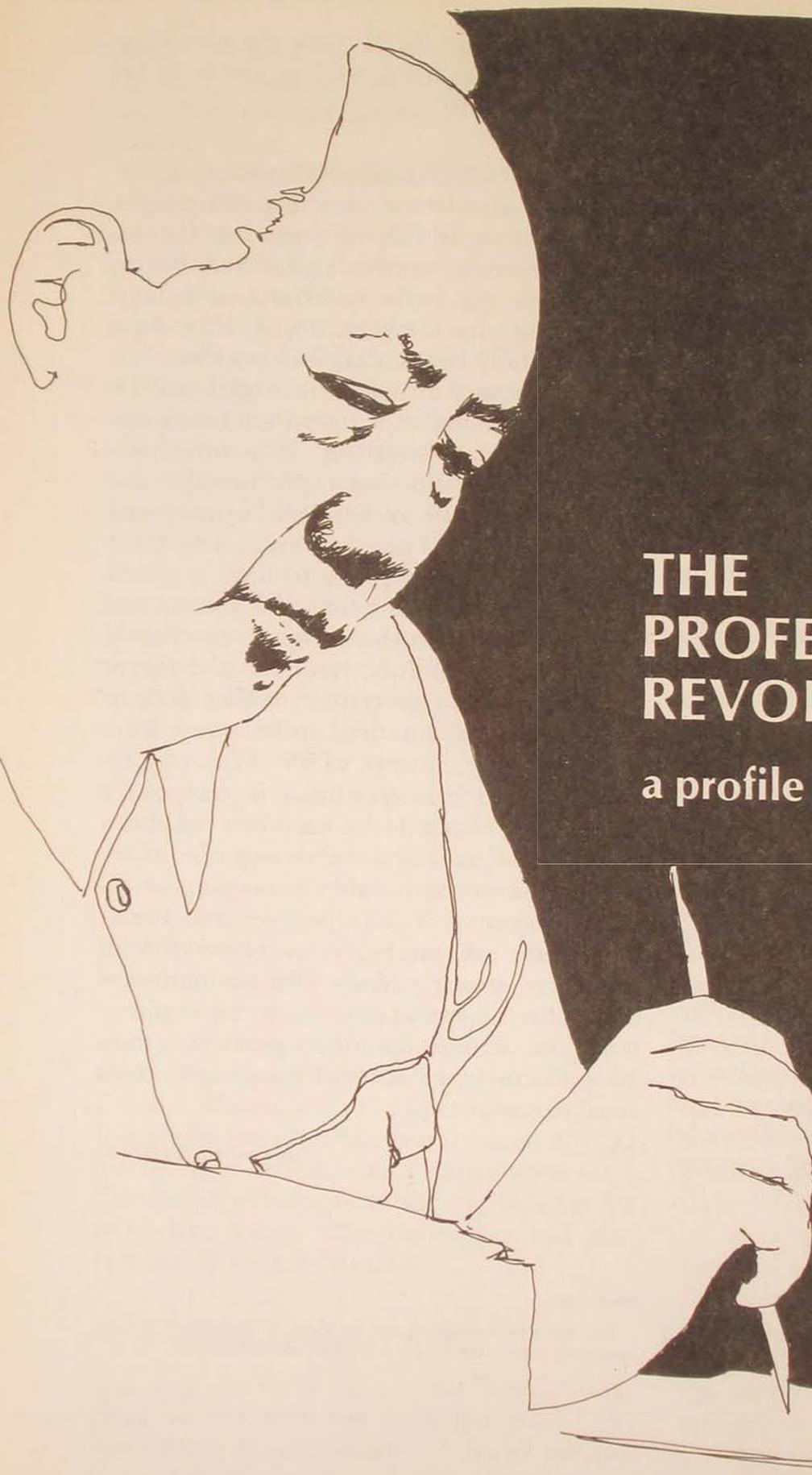
Fort Collins, Colorado

Note

1. Colonel Robert D. Rasmussen, USAF, "The A-10 in Central Europe: A Concept of Deployment-Employment," *Air University Review*, November-December 1978, pp. 26-44.

Disclaimer

The opinions stated here are the views of the authors and not necessarily those of the Air Force or Department of Defense.



**THE
PROFESSIONAL
REVOLUTIONARY**
a profile

DR. MOSTAFA REJAI

A UNIQUE phenomenon of the twentieth century, the professional revolutionary provides an endless source of fascination for both scholarly and popular imagination. Observers with a romantic outlook portray the professional revolutionary as pure, virtuous, and idealist—as a heroic fighter for humanity, freedom, and justice. Those with a cynical cast of mind see the professional revolutionary as fanatical, psychopathic, and criminal—as a failure in a society the complete destruction of which alone would yield proper revenge. As we shall see, however, neither view is valid.

The genesis of the concept of professional revolutionary is found in Lenin (*What Is To Be Done?* 1902), who was also the first to personify it. Lenin defined the primary need of a revolutionary movement in terms of a secret, small, tightly knit, highly disciplined organization of professional revolutionaries—that is, men who devote their entire life to revolution, who turn revolution into a calling, a vocation, a mission.

The nationalist and revolutionary movements of the twentieth century have catapulted into prominence a host of professional revolutionaries in addition to Lenin. What do these diverse men have in common, and why/how did they become professional revolutionaries?

This treatment of the professional revolutionary derives from a much larger study of 64 prominent revolutionary leaders from 12 major revolutions of the past. These revolutions occurred in England (1640s), America (1776), France (1789), Mexico (1910), Russia (1917), China (1949), Bolivia (1952), North Vietnam (1954), Hungary (1956), Cuba (1959), Algeria (1962), and France (1968).

Among the 64 leaders are 14 individuals who meet the requirement for professional revolutionary. They are Nikolai Lenin, Joseph Stalin, Leon Trotsky, and Grigori Zinoviev of Russia; Chu Teh, Lui Shao-ch'i, Lin Piao, and Mao Tse-tung of China; Ho

Chi Minh, Lê Dúan, Troung Chinh, and Vo Nguyễn Giap of North Vietnam; Fidel Castro and Ernesto Guevara of Cuba. There are undoubtedly other professional revolutionaries, but these fourteen individuals are the basis for a composite profile in the pages that follow. It goes without saying that not every individual embraces every trait identified.

THE professional revolutionary is born in an urban setting or, if born in a rural area, experiences early and sustained exposure to urban life. The impulse to revolution, in other words, originates in urban centers, though subsequently it may be “exported” to the countryside. The urban milieu introduces the professional revolutionary to a variety of radical ideologies in his late teens or early twenties. By the age of twenty-five, he is virtually certain to have taken actual part in revolutionary agitation and organization.

The professional revolutionary comes from a middle or lower class family with a relatively large number of siblings. Although probability considerations would dictate otherwise, he is more likely to be an oldest or a youngest rather than a middle child. He typically comes from the main ethnic and religious groupings in his society; on occasion, however, he may represent a minority group, most likely Jewish. As time passes, his religious affiliation—whatever its origins—takes a sharp turn to atheism.

The professional revolutionary is probably reasonably well educated. This education takes place in public institutions, which brings him into contact with a spectrum of population not found in private or parochial schools. He is almost certain to have gone through high school and quite likely to have had college experience or professional training in such fields as medicine, law, education, the military, or the ministry. Regardless of the nature and extent of his education, the professional revolutionary is likely

to be a prolific writer, chiefly on matters of revolutionary theory and practice. As such, he can be labeled an "intellectual."

While his education may qualify him for one of the established professions, the professional revolutionary does not take his occupation seriously. Thus, for example, Lenin obtained a law degree but hardly practiced law; Guevara was a physician who never practiced; and Mao, Ho, and Giap all taught school for only short periods of time. The only exception to this rule is the military profession, which is necessarily taken with utter seriousness. In fact, should he lack formal military training as a requisite component of his skills, the professional revolutionary acquires military experience in the course of the revolution in informal ways.

While there is some likelihood that he participates in established political institutions and processes—in order either to manipulate or subvert them—the professional revolutionary is irreversibly committed to radical organization and agitation. He is also quite likely to have a lengthy record of arrest, imprisonment, or exile.

The professional revolutionary is a cosmopolite: he travels widely, gaining extensive exposure to foreign cultures, values, traditions, and languages. This diversity of foreign exposure accounts, in part, for the eclectic nature and origin of the ideology to which the professional revolutionary subscribes. Building on the experiences of his predecessors and counterparts in other societies, synthesizing a variety of beliefs and values, the professional revolutionary adapts foreign ideologies to the conditions and needs of his own country. In general, he is most likely to fuse shades of Marxism (including Marxism-Leninism or communism) with forms of nationalism. When combined, these two doctrines have proved the most explosive revolutionary ideology of the twentieth century.

As a rule, the professional revolutionary

is optimistic about the "nature of man." He sees man as basically good and rational but oppressed by and alienated from the society in which he lives. Hence, revolution becomes an act of total liberation.

Similarly, the professional revolutionary maintains a highly positive attitude toward his own country, as his nationalist ideology virtually requires. On the other hand, his image of the international society is dualistic: he sees the world in terms of "friends" to be cultivated and "enemies" to be fought.

WHAT life experiences account for the emergence of the professional revolutionary?

He probably led a stormy childhood characterized by early rebelliousness, parental conflicts, or loss of one or both parents. He is likely to have been born to a large family, and he tends to be either the oldest or the youngest son. What accounts for the preponderance of oldest and youngest children among professional revolutionaries? Recent findings in the field of child psychology cast some light on the subject.¹

Oldest sons are typically held to strict standards of competence and achievement. As a result, they tend to attain eminence in their chosen endeavors, revolution included. Moreover, oldest sons are likely to experience intense feelings of anxiety over the loss of parental affection/attention once siblings begin to arrive. Coupled with this anxiety are intense feelings of guilt over the hostilities they exhibit toward their siblings. Externalizing and politicizing these feelings of anxiety, hostility, and guilt—even to the point of revolutionary action—may be a way of managing one's psychic balance.

Youngest children are more striving and defiant toward their siblings—and probably toward the world in general. They are more competitive and more vigilant in an effort to maintain their status and possessions in the cruel world that a large family may rep-

resent. Their perception of relative parental neglect and deprivation may generate impulses toward rebellion. Being highly group-oriented, youngest children may see revolutionary movements as a means of maintaining and augmenting their sense of identity and belongingness.

In contrast to all this, middle children are not subjected to the strict parental codes and norms of behavior that are applied to the first-born. Middle children are better adjusted and satisfied with their lives than either the oldest or the youngest ones. Understandably, they do not seek radical social change.

The professional revolutionary carries the rebelliousness and conflicts of his childhood on to school, where processes of radicalization gain fresh momentum. Exposed to a variety of persons and views but associating mostly with his own kind, he has his horizons broadened, his consciousness enhanced, and his intellectual development gains pace. He is typically found in the forefront of agitation, boycotting classes, leading student strikes, and the like.

The radicalization of the professional revolutionary is completed in foreign travels. He becomes cosmopolitan in many ways: he gains exposure to a variety of cultures and ideologies, personally experiences or witnesses varying modes of oppression and exploitation, shares experiences with other revolutionaries, and develops a set of standards against which to judge his own society.

THE development of the professional revolutionary is also marked by the evolution of a set of psychological attributes. To begin with, the professional revolutionary is driven by a sense of justice/injustice and a corresponding attempt to set things right. This sense of justice/injustice may be personally rooted; it may be perceived in societal conditions, or it may be personally

based and projected outward onto the larger society. Whatever form it may take, the sense of justice/injustice is present in a most conspicuous fashion.

The professional revolutionary is motivated by nationalism and patriotism. He may seek to maintain the independence and integrity of his nation. He may set out to free his nation from the oppression and exploitation of another nation. He may wish to improve the status, prosperity, and prestige of his country.

The professional revolutionary is vain, egotistical, intent on gaining recognition of his personal superiority. He may have delusions of grandeur, seeing himself as an extraordinary man driven by sublime moral principles and called on by a higher order to bring liberty, equality, and fraternity to humankind. In undertaking all this, the professional revolutionary seeks symbolic immortality.²

The professional revolutionary is ascetic, austere, and puritanical. Self-discipline, self-reliance, self-denial, and relentless emphasis on hard work set him apart from ordinary beings. Accordingly, his demand for "virtue" is ceaseless, chronic, and compelling. Evil and corrupt as he finds the existing society, he feels called on to replace sin, greed, and lust with temperance, industry, and purity.

The professional revolutionary tends to be a marginal man in his society, that is, he may deviate in important ways from accepted social norms. This marginality may be physical, social, or psychological. The professional revolutionary may experience bitter personal humiliation, particularly in colonial contexts. He may be scolded in school for being a member of a minority group or coming from a peasant background. Similarly, he may be berated for physical disfigurement of various kinds: unusual features, scarred face, or short stature. In any event, frustrated and humiliated, the professional revolutionary com-

pensates for his marginality by projecting his feelings of inferiority and low self-esteem outward onto the larger society.

The vain, ascetic, austere, marginal professional revolutionary has a gentle side as well: he probably possesses qualities of aestheticism and romanticism. He may be a lover of literature and philosophy (Trotsky, Ho, Guevara), or a lover of poetry (Guevara), or, indeed, he may be a poet in his own right (Mao). He may be a nature lover (Mao). He may have a passion for music (Lenin).

THE professional revolutionary is particularly adept at developing and deploying two elements that are crucial determinants of revolutionary success or failure: ideology and organization.

Revolutionary ideology has three components: (1) a thorough-going critique of the existing order as inhuman and immoral; (2) a depiction of an alternative, superior order embodying positive values of liberty, equality, and fraternity; and (3) a statement of plans and programs intended to realize the alternative order.

Deploying such an ideology, the professional revolutionary undermines the confidence and morale of the ruling regime, rationalizes and legitimizes the need for revolution, politicizes and mobilizes the masses, enhances the followers' sense of cohesion and solidarity, and elicits commitment and devotion. He does not adopt an inflexible or purist ideological posture but deliberately dilutes and soft-pedals ideology in order to maximize popular support and make room for maneuver and compromise. He is pragmatic and opportunistic.

Organization is a fundamental adjunct to ideology, the link between ideology and action. The professional revolutionary translates ideology into action through the medium of organization. Ideology helps "reach" the masses; organization functions to tap their energies and channel them toward the

realization of revolutionary objectives.

Deploying political, military, and paramilitary organizations, the professional revolutionary eventually launches an offensive on all fronts. He coordinates a program of: (1) maintaining close contacts with the masses; (2) continuing to politicize and mobilize them by means of distributing incentives or punishment, as appropriate; (3) recruiting, socializing, and training cadres and fighters; (4) fighting the battles that need to be fought; (5) gathering maximum intelligence about the enemy; and (6) unleashing a sustained policy of terror and violence that may eventually topple the existing regime.

WHILE the professional revolutionary is a definite personality type, he is neither uniformly noble nor uniformly evil. When combined, the romantic and the cynical views of the professional revolutionary hold a degree of validity. Alone, neither is capable of accounting for this unique phenomenon of our age. The professional revolutionary is a distinctive product of a set of circumstances, a variety of complex and sometimes contradictory attributes, a series of life experiences, a host of psychological dynamics, and an array of ideological and organizational skills.

The professional revolutionary is an outgrowth of increasing urbanization, rapid developments in communication and transportation, the trend toward universal education, and diffusion of revolutionary ideologies. In a word, ironical as it may be, the professional revolutionary is an inescapable by-product of the very modernity that has been a distinguishing mark of the twentieth century.

Miami University, Ohio

Notes

1. Cf. Lucille Forer and Henry Still, *The Birth Order Factor* (New York, 1976).

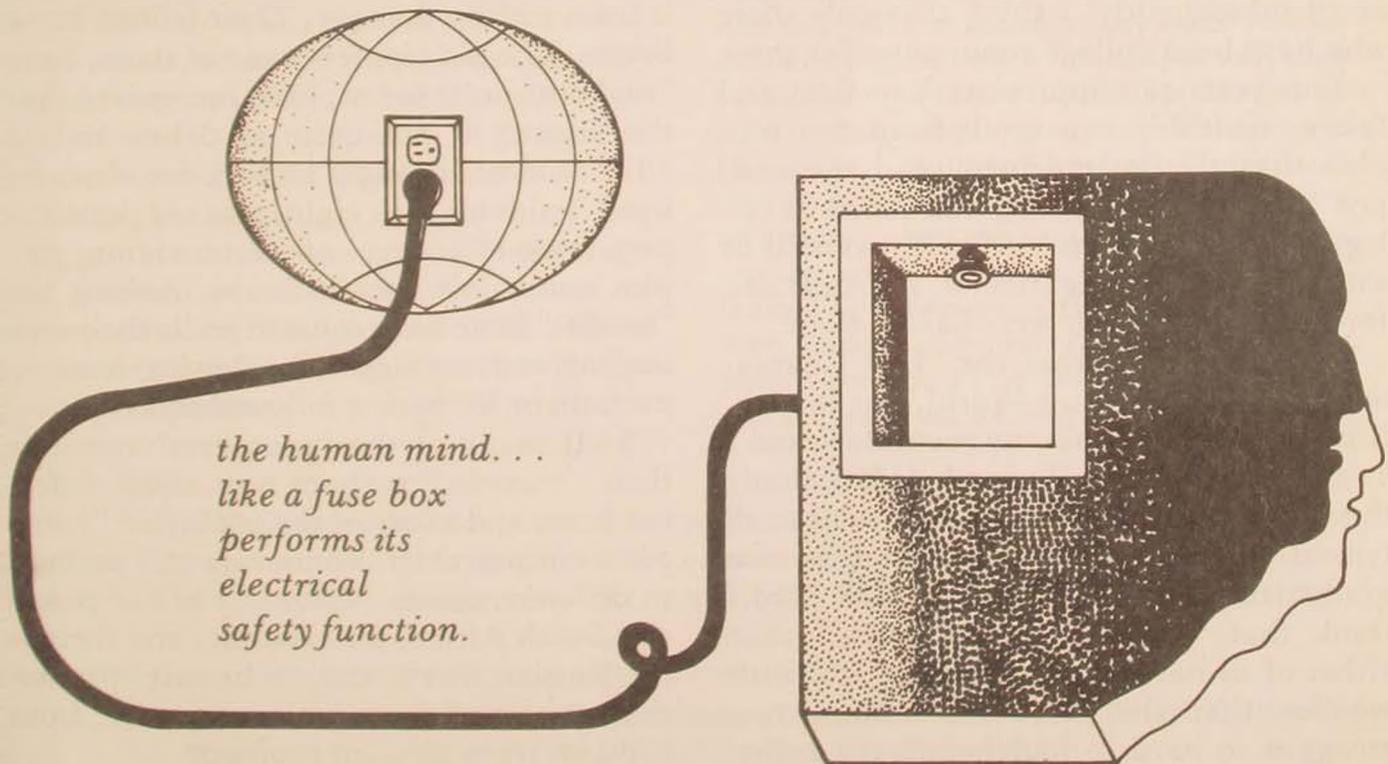
2. Cf. Robert J. Lifton, *Revolutionary Immortality: Mao Tse-tung and the Chinese Cultural Revolution* (New York, 1968).

books and ideas

O TEMPORA! O MORES!

DR. JAMES H. TONER

FOR anyone who was graduated from college, as I was, in 1968, reading, writing, or conversing about the Vietnam War will engender some pain. When confronted with inordinate suffering and grief, the human mind seeks to blot it out; the psychological defense mechanism of *denial*—which performs its mental safety function almost like a fuse box performs its electrical safety function—is occasionally invoked to screen out unpleasant reminiscences. Rather like a man driven



to understand what motivated him to do some deed which, later, he judges as odious, so now does the American nation struggle to comprehend the recent awful chapter of its history. It is odd that, regardless of their judgments about the valor or the viciousness of the war, students of the Vietnam conflict can say, in one voice: "Alas for those times! Alas for those morals!"

My college roommate of three years, who was a self-proclaimed Marxist revolutionary (albeit a rather tranquil one), often bitterly debated me about the war which we both followed in the pages of the *New York Times*. When last I saw him, a year after our college graduation, he served as an usher at my wedding: My more recent friends were then amazed at this rather unkempt attendant; his more recent friends were then amazed that he would attend the wedding of one being married in the dress blues of an Army officer. My roommate was "counter-culture"; I was "establishment." In the ornithological argot of the day, he was the dove, and I was the hawk. Our conversations a decade ago were strained, if civil. We were to correspond once, five years later, and not at all subsequently. I think that only those who have been college roommates for three or four years can appreciate how firm and fast a friendship can result from two people's sharing the imagined (and the real) joys and sorrows of young adulthood in college. Odd that so fast a friendship could be shattered by the vagaries of an American foreign policy. Yet we were hardly alone.

Strange, isn't it, that the "Lost Generation" used to mean post-World War I youth. It is peculiar, too, that my roommate and I both thought ourselves moral: I, for joining the Army; he, for resisting. If we were at all typical of the Lost Generation that was graduated from college about 1968 (and I think that we were more "typical" than either of us has ever understood), it is little wonder that the American nation now struggles so hard to understand the suffer-

ing that caused or accompanied or resulted from that congeries of events subsumed so neatly under the simple heading "Vietnam." The ancient Greeks enjoined us to know ourselves; such knowledge, they said, was the origin of wisdom. They never told us that knowing ourselves was so hard.

The recent American Lost Generation is schizophrenic. Some of us are realists and understand what we perceive as the limitations of the human condition; others among us are idealists and understand what we perceive as the potential of the human condition. Of the hundreds of articles, books, and films that I have seen about Vietnam, only a precious few recognize the Aeschylean truth about the *genuinely* serious youth—orthodox or otherwise—of the new Lost Generation: We all thought ourselves ethical and moral; and we all thought that the others were obtuse or barbarous. And the negotiator is not yet born who can reconcile two factions, each of which claims ethical purity for itself and asserts ethical odium for its opponents.

There are, of course, some converts. Some of the more rabid "antiestablishmentarians" have joined the system—to change it from within, they say. Their fellows know better. The old yippies, some of them, have "sold out" or, it seems, have recognized that the country is not quite as debauched in 1979 as it was thought to be a decade or so ago. Besides, their eight-year-old kids expect to go to college, and even alumni yippies want a summer vacation. Among the "hawks," some have come to revile their own actions and apologize for having worn a uniform or for having followed orders.

Still, many of the "protesters" continue their "crusade," perhaps now along different lines; and many of the self-styled "patriots" continue their "commitment," perhaps to different causes. There is nuclear power and South Africa, for example; and there is the Russian threat and, to be sure, promotion up a notch from junior executive, from captain, from assistant professor.

So many of us still cannot talk with one another. For some, the war in Vietnam was as stupid or as immoral as ever; for others, the war in Vietnam, perhaps more now than ever before, can be seen as purposeful and as moral. We who saw things so differently ten years ago still see things similarly now. Perhaps it is because, having made an intellectual commitment in our youth or having accepted a vantage point then, we now find that we lack the mental vigor or the moral courage to speak those awful words, "I was wrong." Lessons of Vietnam—they are there for everyone to learn, if only to fortify an already crenellated position.¹ Ask the debaters about the domino theory; about the Southeast Asian bloodbath; about Vietnamese expansionism; about Chinese geopolitical patrimony; about the global balance of power; about collective security—and you will find to your consternation that the answers which we of the Lost Generation provide, depending on our decennial beliefs, will result in your thinking that we are talking about *different wars!* We cannot agree on the outcome of the war—in part because we cannot even agree on when it started—whose "fault" the war was, whether the circumstances surrounding the American commitment in force in 1964 justified that commitment, or who "won" the war. As in schizophrenia, we of the Lost Generation have two dissociated personalities. And the historian is not yet born who can reconcile two factions, each of which claims diplomatic or military omniscience for itself and asserts diplomatic or military malefaction on the part of its opponents.

I HAD intended to provide a rather routine review of the books provided me until I recognized—chastened—that,

with only rare exceptions, we of the Lost Generation still read and see things through the ideological spectacles we prescribed for ourselves a decade ago. Small wonder, then, that Ira C. Eaker, who is a retired three-star Air Force officer, would say of Admiral Ulysses S. G. Sharp's book† that it "is the best book I have read on [the Vietnam] conflict."² General Eaker has a point. (Here, I can almost hear my old roommate saying, "Of course you would agree with Eaker! After all, you *were* in the Army.") He argues, I think convincingly, that the United States simply forgot the lessons we paid for with blood during the Korean War. The United States, he asserts, failed to marshal its military power to support effectively its diplomacy during the Vietnam War. This is all true enough, but where Admiral Sharp takes a wrong turn is in arguing that

I am decrying the supposition—shown nowhere more vividly than in the mishandling of the air war—that somehow military strategy and tactics can be orchestrated to satisfy all manner of political limitations. It is a supposition as incredible as it is illogical and dangerous. The aims or objectives of an international political strategy may quite reasonably and legitimately be limited, as were ours in Vietnam, but the actual application of military force required to achieve those aims cannot and *must not* be tactically limited. Our civilian leadership has the awesome task of deciding when the United States should resort to armed force to gain its objectives, limited or otherwise. Once the decision has been made to wage war, that leadership must permit the war to be engaged expeditiously and full bore, not halfway. (p. 270)

The late John Foster Dulles, dead twenty years, would be amazed to find that the idea of massive retaliation still finds favor in some quarters. The late General MacArthur,

†Ulysses S. Grant Sharp, *Strategy for Defeat* (San Rafael, California: Presidio Press, 1978), 311 pages. No price indicated.

dead fifteen years, would be amazed to find that the idea of "no substitute for victory" — incidentally, a chapter title in Westmoreland's *A Soldier Reports* — still finds favor in some quarters. No wonder that Bernard Brodie calls Sharp "one of the most pronounced hawks of the Vietnam War."³ Like Westmoreland, Sharp was intimately involved in a limited, political "Clausewitzian" war whose nature seems wholly to have escaped him. "The most powerful country in the world," Admiral Sharp argues, "did not have the will power needed to meet the situation." Thus does he blithely ignore not only international politics but the domestic political exigencies which, after all, are at the heart of our republican form of government. Sharp's quarrel is not with Presidents Johnson or Nixon but with the American people and with the American political process.

My old roommate would doubtless dismiss Sharp as a jingo and would thus miss the admiral's reasoned points about the intimacy that exists between military power and diplomatic purpose and about the American loss of the Korean lessons. (pp. 156, 239) Yet Sharp's supporters, among them General Eaker, ignore the Clausewitzian lesson that diplomacy does *not* end with the onset of war and that politics is the purpose for which wars are fought. The day of the crusade is over.

AMONG the hundreds of books about Vietnam, which while offering little of long-term scholarly significance nevertheless permit one to taste something of the terrible human drama of Vietnam, is that by Alan Dawson, a reporter who watched the

1975 fall of Saigon. His book[†] is sensitive and well-written but contains very little that is new to the close student of the Vietnam War. Dawson is probably correct that "the tragedy and treachery of the evacuation of Saigon will be told for years. There is no indication, however, that any but a handful of U.S. officials learned any lessons." (p. 339) Dawson's portraits of Thieu, Graham Martin, and a number of other protagonists in the final drama are worth reading — as is his moving account of the March 1975 Convoy of Tears from the Central Highlands — but the book will add little to historical scholarship.

A similar judgment can be made about Allan Millett's work,^{††} which is a collection of twelve essays, all of which appeared in the *Washington Post*. If one enjoys this kind of Procrustean collection, the book is all right and perhaps would be useful for reference libraries. The essays are of varying quality, and this is not the place to attempt to review them. It may be enough to record here that this *is* a serious collection — including pieces by such writers as Laurence Stern, Charles C. Moskos, and Ward Just — but it suffers the same handicap (and the same eventual oblivion) that most anthologies endure.

I RARELY extol books, perhaps because of sheer professional jealousy. Yet I must depart from my normal practice now in order to mention what I regard as the finest book about America in Vietnam that I have yet read. My roommate, I am sure, would argue that Guenter Lewy's book is a meretricious effort to justify American in-

[†]Alan Dawson, *55 Days: The Fall of South Vietnam* (Englewood Cliffs, New Jersey: Prentice-Hall Inc., 1977, \$12.50), 366 pages.

^{††}Allan R. Millett, ed., *A Short History of the Vietnam War* (Bloomington: Indiana University Press, 1978, \$3.95), 169 pages.

volvement in Southeast Asia—an involvement once termed “an obscenity” by a linguistics professor given to such olympian assessments. It is difficult for me to review Lewy’s book without sounding as if I want to write the dust jacket for it. But it is simply an extraordinarily scholarly and pellucid treatment of the American experience in Vietnam. The book is remarkably free of the left- and right-wing histrionics that characterize so many books, articles, and films about Vietnam. Lewy’s book is an academic gem; it deserves wide circulation and close attention. At the risk of sounding simply obsequious, I must say that this work[†] is the measure against which other Vietnam books should now be judged. Lewy argues that “the sense of guilt created by the Vietnam war in the minds of many Americans is not warranted and . . . the charges of *officially condoned* illegal and grossly immoral conduct are without substance.” (p. vii) Lewy is no apologist for Westmoreland; neither is he a *soi-disant* chauvinist who is unalterably proud of all American deeds in Vietnam: “If the American record is not one of gross illegality, neither has it been a model of observance of the law of war.” (p. 268) He argues that the charge of genocide against the United States is “absurd” (p. 301) and that the bombing of North Vietnam “conformed to international law, and the application of American air power was probably the most restrained in modern warfare.” (p. 416)

Lewy perhaps would agree that the recent Lost Generation was unique in its arrogance about things “academic.” My roommate used to inform me, rather peremptorily, that I simply did not understand the sociology of Southeast Asia. (He was quite right.) I used to inform him, as if I were the expert, that he understood practically nothing of

the exigencies of statecraft. (*I was right!*) As Lewy puts it, about a decade ago: “Everyone—from clergyman and biologist to movie actor and pediatrician—could become an instant expert on international law, Southeast Asia, and foreign policy generally.” He contends that “professors who would never have dared treat their own disciplines in such a cavalier fashion proclaimed with assurance solutions to the Vietnam problem at ‘teach-ins,’ complete with folk singers, mime troupes and other forms of entertainment.” (p. 435) Lewy’s book is a most valuable scholarly work yet one which is a readable and vital effort. Soldiers and scholars alike will want to read this book and have it on their shelves. Even at its inflated asking price, it is well worth the investment.

In time, perhaps, the Lost Generation of about 1968 will find one another again. Perhaps all of us would do well to learn, with Paul, that we know only in part, for “we see now through a glass, darkly” (I Cor. 13:12). Some of us children of 1968 judge events by consequences, hard as they are to predict or even to assess after the fact; others of us judge events by intentions, hard as they are to evaluate. Unfortunately, human beings lack the desideratum of prescience. I think Lewy says it best, and it merits quotation:

Just as the success of a policy does not prove that it was the only possible successful course of action, a policy can be correct even if for a variety of reasons it fails. The commitment to South Vietnam was made by intelligent and reasonable men who tackled an intractable problem in the face of great uncertainties, including the future performance of an ally and the actions and reactions of an enemy. The fact that some of their judgments in retrospect can be shown to have been flawed and that the outcome has been a fiasco does

[†]Guenter Lewy, *America in Vietnam* (New York: Oxford University Press, 1978, \$19.95), 540 pages.

not make them villains or fools. If Hitler in 1940 had succeeded in conquering Britain, this would not have proven wrong Churchill's belief in the possibility and moral worth of resistance to the Nazis. Policymakers always have to act on uncertain assumptions and inadequate information, and some of the noblest decisions in history have involved great risks. As long as there exists a reasonable expectation of success, the statesman who fails can perhaps be pitied, but he should not be condemned. (pp. 440-41)

So many of the Lost Generation of a decade ago acted nobly—out of the deepest convictions of their minds and hearts—that, if on that account only, perhaps there are grounds for partial reconciliation. If, like Socrates, one acts on the counsel of his own wisdom and is yet willing to pay the social price therefor (and one is reminded of the late Dr. Martin Luther King's moving 1963 letter from his Birmingham jail cell), cannot he or she not be accepted as patriot? In Paul's letter alluded to earlier, he tells us

that, of the virtues of faith, hope, and charity, the last is the greatest. After the dreadful chapter of our history over which President Lincoln presided from 1861 to 1865, he counseled charity, too, in the effort to bind up the nation's wounds. One wonders if all the thousands of alienated old college roommates have in them anything that is Pauline or Lincolnesque. That way lies understanding—and reconciliation.

The old friends so torn by a conflict that rages yet may find counsel and consolation in Matthew Arnold's classic "Dover Beach":

... let us be true
 To one another! for the world, which seems
 To lie before us like a land of dreams,
 So various, so beautiful, so new,
 Hath really neither joy, nor love, nor light,
 Nor certitude, nor peace, nor help for pain;
 And we are here as on a darkling plain
 Swept with confused alarms of struggle and
 flight,
 Where ignorant armies clash by night.

Norwich University

Notes

1. See, for example, W. E. Vinacke and R. B. Zajonc, "Thinking," in *The International Encyclopedia of the Social Sciences*, XV, p. 608.

2. *Air Force Times*, 27 November 1978.

3. Bernard Brodie, *War and Politics* (New York: Macmillan and Company, 1973), p. 216n.

HALDER IN RETROSPECT

CAPTAIN DANIEL T. KUEHL

AMONG the truly unique source documents on World War II is the set of diaries kept by Colonel General Franz Halder while he was Chief of the German General Staff (*Oberkommando des Heerleitungs*, or OKH) from 1938 until his dismissal in September 1942. Published as *The Halder Diaries*,[†] these journals present a detailed insight into the operations of the German General Staff during the early years of World War II. They also yield a glimpse into the mind of the last true Chief of the General Staff as it was created by Scharnhorst, for those who followed Halder were either not intellectually capable of acting in this mold or were faced with a military and political situation (as was General Heinz Guderian) that was utterly hopeless.

At first glance, Halder would not appear to have been cut from a soldier's cloth at all; with close-cropped hair and wearing a pince-nez, he seems more in the image of a pedant. Yet the *Diaries* reveal a man of honor and great intellectual stature, an excellent soldier who time after time directed quantitatively inferior forces to victory through exploitation of their qualitative superiority. His military achievements stemmed not so much from genius as from hard work and a clear understanding of strategy. Field Marshal Erich von Manstein described him with Moltke's term: "Genius is diligence." Prior to World War I, he was appointed to the Bavarian General Staff and later to the German Great General Staff. Se-

lected after World War I as one of the few officers in the small 100,000-man German army permitted by the Treaty of Versailles, Halder rose through positions of importance until he again became a member of OKH in 1938. When General Ludwig Beck resigned in 1938 in protest of Hitler's aggressive policies, Halder was appointed Chief of OKH, partly because of Hitler's belief that Halder was apolitical. Hitler was badly mistaken, however, for Halder had opposed Hitler since the early 1920s. During the Blomberg-Fritsch crisis of 1938, Halder had pushed Beck to act against Hitler, only to be told later by Beck "I now realize you were right at the time. Now all depends on you." Although Halder actively opposed Hitler, he was still the Chief of OKH, and, as such, he directed the German army to many of its greatest triumphs until, in September 1942, he was sacked by Hitler for opposing his strategy in Russia. After the failure of the 20 July 1944 plot against Hitler, Halder was arrested, along with the members of his family, and spent the remainder of the war in a concentration camp. His survival can probably be attributed to the successful concealment of his activities during 1938-39.

Blitzkrieg 1939-40: Triumph

Halder's role in the operations of the German army encompassed two broad phases: the planning and operations in Poland and

[†]Arnold Lissance, editor, *The Halder Diaries: The Private War Journals of Colonel General Franz Halder*, 2 vols. (Boulder, Colorado: Westview Press, 1977, \$120), 1594 pages.

France during 1939-40 and the German offensives in Russia in 1941-42. The *Diaries* contain little concerning the planning of the Polish campaign, since they do not begin until 14 August 1939, by which time the preparations had been completed. Following the end of the fighting in Poland, Germany had to answer certain questions concerning its remaining enemies, England and France: Could the war be won by remaining on the defensive in the West, or must Germany attack? If Germany must strike, where and when must the attack be made? In the past, OKH would have been responsible for answering questions of such far-ranging strategic importance, and Halder did try to provide Hitler with his views. But Hitler had already reached his decisions, independent of OKH guidance; he was resolved to attack at the earliest possible date, and he directed OKH to prepare the plans for attack.

The initial OKH plan was merely an updated version of the 1914 Schlieffen plan calling for a drive through Belgium into northern France, then wheeling south to pin the bulk of the French army against the Maginot Line and Swiss border. This proposal was immediately attacked by the advocates of the panzer forces, who believed the only way a decisive victory could be won was through the use of the armor's mobility. General Guderian and Field Marshal von Manstein were the champions of this view. The question was debated countless times until the plan of attacking with the armor through the woods and hills of the Ardennes, across the Meuse River, and into northeastern France was finally adopted.

The *Diaries* clearly reveal the strategic abilities of Halder and shortcomings of Hitler during that crucial period. While Halder calmly directed the advance into France and steadily pursued the strategic objectives, Hitler hesitated at critical moments, worried about his flanks, and finally made the disastrous decision to halt his forces just short of Dunkirk. Halder commented bitter-

ly on Hitler's interference. Two entries on 17 May 1940 are illustrative. At noon Halder noted: "Apparently little mutual understanding. The Führer insists that main threat is from the south. (I see no threat at all at present!)" Later in the day Halder noted: "Rather unpleasant day. The Führer is terribly nervous. Frightened by his own success, he is afraid to take any chance and so would pull the reins on us." The climax of this interference was the British army's escape at Dunkirk.¹

The conclusion of the offensive, the drive to the Swiss border and the capitulation of France, must have been tremendously satisfying to Halder, who had endured the humiliation of 1918-19 and the Treaty of Versailles. Yet within the fruits of this overwhelming triumph were the seeds of disaster. In spite of his hesitancy and strategic bumbling, Hitler was convinced that the victory had been achieved only because of his genius and ruthless drive. He was unwilling or unable to see his mistakes and failures and above all could not profit from them. The results of this fatal hubris would arise in The Steppes of Russia.

Blitzkrieg 1941-42: Disaster

Planning for Operation Barbarossa, the attack on Russia, began in mid-1940, when Halder directed some members of OKH to prepare basic thoughts on how a German offensive against the U.S.S.R. could be mounted. In the initial planning, Halder and his assistants (including, ironically, Field Marshal Friedrich von Paulus, who was to surrender at Stalingrad thirty months later) envisioned a series of "limited" objectives, such as the seizure of the Ukraine and White Russia. Hitler had no less than the utter destruction of the Russian state and culture as his objectives, however, and the resultant divergence of opinion over the objectives of the attack seriously weakened it.

On 6 September 1940, Halder directed that substantive plans for the attack be prepared, and by mid-November the plans and outline maps were ready. Shortly thereafter the planners conducted a war game, a simulation that produced results indicating that the German forces would achieve a line Leningrad-Smolensk-Dnieper River by mid-summer but that the central group of armies would then come under pressure from its flanking armies to halt and support them. At that time a critical decision would have to be made as to the direction the advance would continue. Prophetically, this was exactly what would happen the coming summer. In early December, Halder discussed the plan with Hitler, and they disagreed over its basic objectives. Halder stressed the importance of Moscow as a transportation, psychological, and political center and argued that its capture should be the primary strategic objective of the attack. Hitler insisted that the attack should be directed toward Leningrad and the Ukraine. This disagreement went unresolved, a situation that would have extremely unfortunate consequences the next August. Nonetheless, Halder and OKH were confident that Russia could be defeated.²

Operation Barbarossa was launched on 22 June 1941, and initial results were excellent. Although Russian resistance was dogged and in some cases fanatical, the panzer columns slashed deeply into the Russian interior. It quickly became apparent, however, that much of OKH's confidence was based on a gross underestimation of the Russian strength. By 8 July 1941, OKH estimated that the Russians had only 46 combat-worthy divisions left; by 23 July this figure had risen to 93 divisions, and by mid-August Halder was to note that: "We reckoned with 200 divisions; now we have already counted 360." In spite of the tremendous losses the Russians were suffering, their strength seemed to increase steadily, and Halder realized that the three divergent at-

tacks along the Leningrad-Moscow-Ukraine axes were spreading the German front far too thin. It was at this point, in mid-August 1941, that the crucial decision predicted months earlier by OKH came due, and on it would hang the fate of the campaign.

By mid-August the front defending Moscow had been cracked open, and the German armored columns were eager to begin the drive toward the capital. But the basic question that had been raised the previous winter still had not been settled: Was the objective to be Moscow or the Russian troop concentrations in the Ukraine? In spite of all the arguments Halder and the commanders in Army Group Center could muster, Hitler chose to execute the maneuver that would envelop some 500,000 Russian troops in the Kiev pocket. This operation was not completed until mid-September, and even then additional time was required for mopping-up operations and to return the panzer forces to the positions they had occupied two months earlier. On paper the Kiev envelopment seemed a great victory, if only because of the capture of great concentrations of troops and materiel, but Halder knew that a strategic mistake of the greatest magnitude had been made. Where once the way to Moscow had been open, the German forces would now have to contend with stronger Russian defenses and with Russia's greatest allies: time and weather.³

The attack toward Moscow could not begin until the end of September, but initial progress was excellent, renewing Halder's hopes that Moscow would be taken before the onset of winter. But this was not to be. The German forces ground to a halt, with both men and machines worn to the breaking point. Worse, the autumn rains turned the so-called roads into quagmires, stopping all movement. In early November, Halder met with the principal field commanders to discuss a continuation of the offensive. Slowly, and at a terrible cost in casualties, the advance was resumed. By the end of the

month, Halder realized that the attempt had failed, and he favored moving into strong defensive positions for the winter. Before this could be done, however, the Russian winter counteroffensive broke like a steel blizzard onto the unprepared, ill-equipped German forces.⁴

While the German troops in the field were going through this desperate period, Halder was beginning his own personal purgatory. On 19 December 1941, Field Marshal Walter von Brauchitsch, the Commander in Chief of the German army, resigned his position, partly because of a heart attack and partly because he could no longer face Hitler. Hitler then announced that he would personally assume the position of Commander in Chief of the Army, in addition to his powers as Commander in Chief of the Armed Forces. Halder considered resigning, but decided to stay, hoping to lessen the impact of Hitler's mistakes. The strain on Halder during this period must have been tremendous, since he well realized that Hitler's indecisive strategy spelled doom for Germany. He had to deal with both sides, Hitler and the field commanders, yet he lacked the authority to convert the field generals' proposals to action. Ignored by *Oberkommando der Wehrmacht* (OKW) and disliked and insulted by Hitler, Halder was unable to influence events, as was apparent to the leaders in the field, and they began to lose confidence in him.⁵

Halder's role in the 1942 German offensive in Russia was primarily that of a voice crying for strategic sanity, a voice that cried in vain. He wanted to stand on the defensive in the east but was overruled by Hitler, who had decided to attack toward the oil fields beyond the Caucasus. Halder had the central armies hold back while the Russians attacked in the Ukraine, then used his forces' superior mobility and tactical handling to smash the Russian flank and drive toward the Volga and the Caucasus. Halder frantically argued against the attempt to

take both Stalingrad and the oil fields, but he was rebuffed by Hitler.

Finally the storm broke. On 24 September 1942 Halder again tried to warn Hitler of what the Russians would do to the long, overextended German flank once winter came, but Hitler had had enough of Halder's cautionings and dismissed him. Thus ended Halder's four years as Chief of OKH. With him, perhaps coincidentally, passed the period of German triumphs. Halder's successors would ply their trade only in retreat.⁶

Halder and the Resistance

When Halder became Chief of OKH in 1938, he told General Beck that the only reason he accepted the position was to work against Hitler's policies. At the time of the Czech crisis in 1938, Halder had already made plans for overthrowing the regime. By September 1938 many of the army's high command were ready to mutiny. The implications of the Blomberg-Fritsch affair deeply troubled the officer corps. Hitler's policy toward Czechoslovakia seemed destined to lead to war not only with the Czechs, toward whom few Germans held any animosity, but also with England and France, which the officer corps felt would be fatal for Germany. In spite of his belief that the rank and file of the army would not support a coup, Halder realized that this was probably the most opportune moment for an attempt on the government. Halder was the man who had to coordinate the actions of the military men who would actually remove Hitler and the civilians who would form a new government. On 28 September 1938, Halder set the proposed coup in motion but was forced to cancel it hurriedly when word was received of the Allied submission at Munich. Hitler's diplomatic victory over the English and French cut the ground from beneath the conspirators; his prestige was suddenly so great that it would have been suicidal to try and

rally the nation against him.⁷

Halder's hope for peace was short-lived, and by early summer 1939 he was trying to warn the British and French of Hitler's intentions regarding Poland, urging them to take a firm stand against Hitler. Resistance elements in the Foreign Office also tried to warn the Allies. Once the war did break out, Halder was on the horns of a dilemma: Although he opposed Hitler and his policies, he was also a German soldier. Even though Germany was engaged in a war that he had tried to prevent, his moral and military duty was clear, and he worked for victory. After the fall of Poland, he was hopeful that the lack of Allied intervention on the Western Front signaled that the war could be ended.⁸

This hope quickly died, for on 10 October 1939 Hitler declared that Germany must attack the Allies as quickly as possible. Four days later, Halder and von Brauchitsch met to discuss how they could prevent this, thereby setting in motion the series of events that would culminate in the debacle of 5 November 1939. Von Brauchitsch told Halder that he was opposed to overt action against Hitler; it would be a negative act that would expose the country in a moment of weakness. He was almost certainly correct, for there is little doubt that the Allies would have taken some action if the German army and Nazi party had suddenly gone after each other's throats. Together, von Brauchitsch and Halder decided to try and delay the attack as long as possible. Halder, however, was quite prepared to do away with Hitler, and he began to prepare new plans for a coup. Halder was afraid that an elaborate plan to arrest and publicly try Hitler, as some civilian members of the Resistance wanted to do, would only make the situation worse. He often said *Bringt dochendlich den Hund um* ("Cannot someone finally put an end to this dog!"), and he felt that Hitler's death would solve many of the Resistance's problems, such as the soldiers' oath sworn to Hitler. Halder favored some form of "acci-

dent" to kill Hitler, yet by October 1939 he starting carrying a pistol, and after the war he stated that there were a number of times over the next three years on which he almost used it against Hitler. He did not use it because he could not bring himself as "a human being and a Christian to shoot down an unarmed man."⁹

By mid-October 1939 the weight of the world was seemingly on Halder's shoulders. Because of von Brauchitsch's unwillingness to act, Halder bore full responsibility for making the decision *if* and *when* to act against Hitler. He also realized how dangerous a coup would be: after polling the three army group commanders, he found that Field Marshals Karl von Rundstedt and Fedor von Bock were opposed to it; Field Marshal Wilhelm von Leeb was only moderately in favor of such an undertaking. On 2-3 November 1939, he and von Brauchitsch toured the front to gather military arguments they could use to convince Hitler to postpone the attack, now scheduled for 12 November 1939. Unbeknownst to von Brauchitsch, Halder had determined that the attack must be stopped the only way possible: the coup would be executed on 5 November. Here occurred one of those events so typical of the German Resistance. On the afternoon of that day von Brauchitsch met with Hitler to suggest a postponement of the attack. Halder, knowing that even at that moment the coup was under way, impatiently awaited von Brauchitsch. Hitler, sensing von Brauchitsch's opposition to his plans, grew increasingly furious with him until he screamed that he knew very well that the generals were planning something other than what he, Hitler, had ordered. Hitler was almost certainly referring to military affairs and the planned attack, but when von Brauchitsch, who emerged white and shaking from his "talk" with Hitler, mentioned this remark to Halder, it struck him like a sledgehammer between the eyes. He naturally assumed that Hitler knew of

the plot, and the ride back to Zossen was filled with visions of the Gestapo. Halder immediately called off the coup, which required some frenzied scrambling by the conspirators, and attempted to cover his tracks. By the time he realized that Hitler did not know about the coup, he was in no psychological state to try it again. At least twice, and possibly three times, Halder tried to lead a move against Hitler only to be forced to call it off in mid-stroke. Never again would he involve himself with an attempt on Hitler, and he played no role in the 20 July 1944 plot.¹⁰

Halder and the Diaries in Retrospect

It would be easy to fault Halder for a lack of nerve in 1939, for we have the gift of hindsight and know what was to follow: Halder did not. Two things probably combined to remove him from the active Resistance. The first was the debacle of 5 November 1939, whose psychological effects must have been devastating. The other was Halder's military background. He was, after all, a German soldier on the Great General Staff. After November 1939, he realized the increasingly better chances Germany had for winning a war against the French and British, and having endured the humiliation of the Treaty of Versailles, he regarded such a prospect with some favor. This was borne out by the brilliant victory gained in May 1940. His unwillingness to act personally against Hitler did not stem from cowardice, for a number of fellow inmates at Flossenbürg, where he was imprisoned after the 20 July 1944 plot, ascribed to him the strongest nerves in camp.

Von Manstein credited Halder's downfall to his divided allegiance. He was an enemy of Hitler who worked for his downfall, yet he was also Chief of OKH for three years of war, during which time he worked unceasingly for German victory. Certainly he was

more than just a capable soldier. He was a man of honor who tried to stop Hitler and convince his fellow soldiers to help him oppose the Führer. He was loyal to his country and to his fellow officers. Indeed, he faced up well to the enormous responsibility he bore, for he was placed in what was perhaps an impossible situation.

After the war, he was interrogated extensively by the Allies, and it was during these interrogations that the *Diaries* were first translated into English by the Office of the Chief Counsel for War Crimes. Although a German edition of the *Diaries* was published in 1960, the few mimeographed copies of the English translation were one of the most important sources of information on the operations of the German army between the outbreak of World War II and Halder's dismissal in 1942. The *Diaries* consist primarily of notes Halder made while listening to briefings, conferences, telephone calls, and so forth, and, as such, do not form a unified narrative but rather a collection of notes and references to myriad items. Their content runs the gamut from operations and tactics to logistics and personnel matters. There is relatively little mention of political matters; since the *Diaries* were available for use by the OKH staff, this is not surprising, as it would have been extremely unwise to include political opinions. Halder did not attempt to conceal his growing dislike of Hitler's interference in operational matters, nor did he hide his low opinion of Hitler's ability as a strategist. An entry dated 23 July 1942 is a good example: "The situation is getting more and more intolerable. This 'leadership,' so called, is characterized by a pathological reacting to the impressions of the moment and a total lack of understanding of the command machinery and its possibilities."

The *Diaries* also reveal a great deal about the state of the German army during the early part of the war. Halder realized that its strength rested in superior mobility and

the tactical ability of its leaders, but he also recognized that this applied only to the motorized forces. Even during the blitzkrieg in France, the infantry was hard-pressed to keep up with the panzers, and the problems caused by this lack of mobility would be increased tenfold in the vast spaces of Russia. The importance that modern armies place on complete motorization of their infantry forces is in recognition of this problem. On the eve of the French campaign, Halder noted that the army was unable to replace even its peacetime attrition of trucks, and he worried about what would happen when they began taking losses in battle. Industrial production was another item frequently mentioned in the *Diaries*, since German industry in 1939 fell far short of meeting the needs of the armed forces. Halder clearly saw the danger of a long war, and he knew that the lack of industrial resources could place Germany in a perilous position.

The *Diaries* also illustrate the problems caused by interservice rivalry. Cooperation between the army and Luftwaffe on the lower levels was excellent, but at the highest levels cooperation among all three services was poor, due in part to the systematic fragmentation caused by the Nazi regime. The *Diaries* point out numerous instances of the lack of coordination and cooperation between the services. Operation Sealion, the proposed invasion of England, was at best a

desperate venture, depending on intimate and continuous cooperation of the army, navy, and Luftwaffe. Yet this cooperation was never exhibited, each service establishing conditions which the other services had to meet before it proceeded with its part of the plan. In contrast to this was the cooperation exhibited by the United States and Great Britain, where the three services of both countries worked in very close coordination with their counterparts.

THE *Diaries* provide a detailed picture of the daily operations of OKH, and they are quite possibly the best available record of the functioning of the high command of a modern military force. The editor of the 1948 English language edition stated that "as such records go, the Halder Diary is unique in scope and continuity, and probably has few equals in importance among the individual contributions to the records of this war." The *Diaries* are probably too expensive for most personal libraries, but no institutional library that hopes to have an authoritative collection on World War II or European history can afford *not* to obtain them. The publication of the *Halder Diaries* in a form obtainable and usable by most libraries and researchers is a very significant step forward for the English language documentation of the war.

Grand Forks, North Dakota

Notes

1. An excellent discussion of this can be found in Sir Basil Liddell Hart's *History of the Second World War* (New York, 1970), pp. 79-83.
2. Robert Cecil, *Hitler's Decision to Invade Russia, 1941* (New York, 1975), pp. 111-12, 124-25; Walter Goerlitz, *History of the German General Staff, 1657-1945* (New York, 1953), pp. 385-87.
3. *Ibid.*, pp. 399-405; David Downing, *The Devil's Virtuosos: The German Generals at War, 1940-1945*, (New York, 1977), pp. 74-77.
4. Earl Ziemke, "Franz Halder at Orsha: The German General

Staff Seeks a Consensus," in *Military Affairs*, December 1975.

5. Goerlitz, pp. 405-9.
6. *Ibid.*, pp. 414-20; Field-Marshal Erich von Manstein, *Lost Victories* (Chicago, 1958), pp. 261-62.
7. Goerlitz, pp. 331-37; Harold C. Deutsch, *The Conspiracy against Hitler in the Twilight War* (Minneapolis, 1968), pp. 37-38.
8. Goerlitz, pp. 350-55.
9. Deutsch, pp. 196-97.
10. *Ibid.*, pp. 215, 228-29; Goerlitz, pp. 364-65.

Potpourri

Analyzing Soviet Strategic Arms Decisions by Karl F. Spielmann. Boulder, Colorado: Westview Press, 1978, 184 pages, \$16.00.

"We just do not have an adequate explanatory model for the Soviet-American arms race." With this introductory quotation, Dr. Karl Spielmann, a Harvard Ph.D. and Soviet defense specialist for the Institute of Defense Analyses, proceeds to attack the basic problem that is the focus of this book—the assumptions which analysts bring to evaluations of why Soviet strategic arms decisions occur.

Drawing on the seminal work of Graham Allison, *Essence of Decision: Explaining the Cuban Missile Crisis* (1971), Spielmann emphasizes the importance of varied approaches and perspectives in the analysis of decision-making. Allison's rational actor approach is transformed into a rational strategic actor approach, which requires the analyst to focus on strategic calculation in the strict military sense and to do so with specific attention to what may be peculiarly Soviet in the strategic rationality underlying Soviet defense decisions. A second perspective, "pluralistic decision-making," combines and augments the organizational process and bureaucratic politics paradigms of Allison. Spielmann's third perspective, national leadership decision-making, requires high centralization of power for decisions on particular strategic weapon systems. The SS-6 program is discussed to illustrate the utility of each of the three perspectives.

Readily acknowledging that his work is only the beginning of a very large analytic task, Spielman is appropriately cautious about the limited data on the Soviet defense environment and the possibilities of preparing bona fide case studies on Soviet decisions.

Dr. James H. Buck
Air War College
Maxwell, AFB, Alabama

Merchants of Grain by Dan Morgan. New York: Viking Press, 1979, 387 pages, \$14.95.

Few professional soldiers pay any attention to grain. Yet armies are seldom effective without their rations, and the fact that we take our rations for granted says much about our culture. Other nations, and other soldiers, are not so complacent, for they must buy their grain from a few surplus-producing nations. The United States is the most important of these, and

if we are energy dependent, we are most assuredly food independent.

We sell our grain to almost everyone who can pay, and to some who cannot, using the helter-skelter distribution system of the grain merchants. This distribution system is dominated by five privately owned, multinational companies. These companies—Continental, Cargill (both American), Bunge (Argentine), Louis Dreyfuss (French), and André (Swiss)—make Pillsbury and General Mills look like the corner drugstore, yet few of us are aware of their existence. This is beginning to change, however, for such incidents as the "great grain robbery" of 1972 have served to awaken us to the significance of grain and its influence as a macrosystem. This growing awareness has produced a promising bud, still a long way from fruition, in *Merchants of Grain*, a fascinating new book by Dan Morgan, a journalist who has successfully evolved into a historian and analyst.

Merchants of Grain is primarily about the five grain companies themselves, but their activities have forced Morgan to delve into history, international relations, economics, business administration, transportation, agriculture and agronomy, and other fields. He is something of a pioneer and complains of the lack of prior sources on the world grain system. He has done an outstanding job with what he had, and if the bibliography is a bit thin, it is probably because there are no more sources worth listing.

In some parts of the world, the grain merchants have more influence than the governments. Continental, for example, brought Zaire to its knees in a grain embargo (sound familiar?) during an incident that brings the phrase "economic imperialism" to mind. Morgan has filled the book with such little-known anecdotes (as well as better known ones) as the Soviet grain deals. These are facets of the international arena not usually observed, and they are important to professional soldiers. They help us to understand the opinions others hold concerning the United States.

Investors in commodities will be especially interested in the chapter entitled "Catch-22," which describes the worldwide newsgathering networks the grain companies employ to turn a profit. The small investor is shooting craps in this business; read the book before putting up cash.

The grain companies are a very important part of today's world, and their role should be better understood. Morgan's book, which places them in a more proper world perspective, should be high on professional reading lists. *Merchants of Grain* is very easy reading and improves our understanding of this macrosystem that helps lock the world together.

Captain Julius F. Sanks, USAF
Hq Space Division (AFSC)
Los Angeles AFS, California

United States National Security Policy in the Decade Ahead edited by James E. Dornan, Jr. New York: Crane, Russak & Co., 1978, 304 pages, \$15.95.

United States National Security Policy in the Decade Ahead is a collection of 13 essays dealing with geographical and functional areas of U.S. national security policy. Unfortunately, all of the contributors are "cold warriors," and despite their impressive mix of academic qualifications ranging from politics and government to history and economics, a common thesis runs monotonously throughout the book—that U.S. national security policy lacks effective leadership, clear direction, and firm conviction, and the U.S. is in serious danger of losing the cold war. "Indeed," states Dornan, "the problem precisely is that while the U.S. has been pursuing détente, Soviet military power and political influence have increased drastically in comparison with the United States." Further, according to the authors, only a hardline approach to world affairs, backed by the resolve to regain strategic superiority over the Soviet Union, can redress this situation.

Individually, the essays are interesting and thought-provoking, but collectively they appear only to serve as support for the editor's concluding article in which he criticizes current U.S. policy and prescribes his formula for revival—a policy he calls a "doctrine of strategic containment," the first priority of which is—you guessed it—to reverse existing trends in the strategic balance between the United States and the Soviet Union.

For a book of essays, *United States National Security Policy in the Decade Ahead* suffers from a serious lack of balance and seems to go to great lengths to restate the obvious. The individual essays are worth reading and warrant consideration, but taken all together the book serves admirably as a sermon for the choir.

Lieutenant Colonel Dallace L. Meehan, USAF
Air Command and Staff College
Maxwell AFB, Alabama

Hitler vs. Roosevelt by Thomas A. Bailey and Paul B. Ryan. New York: The Free Press, 1979, 303 pages, \$12.95.

The authors call their work *Hitler vs. Roosevelt*. It could as well have been called *Roosevelt vs. Hitler* because Roosevelt more often reacted to Hitler's action than vice versa, although at times there was an action, a reaction, and then a reaction to the reaction. In any event, Thomas Bailey and Paul Ryan provide the rea-

sons for the differences between Hitler and Roosevelt from 1939 until Hitler summed up his reasons for war against the United States on 11 December 1941.

The authors' objective is to bring together "for the first time a complete account of all the friction points of any consequence in German-American relations that involved ships, ship incidents, or other naval matters within the framework of unfolding events" during the undeclared naval war of 1939-41 between Germany and the United States. To readers familiar with diplomatic history, the skilled touch and penchant for alliteration of Bailey, dean of American diplomatic historians, will be recognized and relished. For those familiar with naval history, retired Navy captain "Rosy" Ryan provides lucid accounts of the naval events involved, including a clear exposition of the difference between convoy and convoy escort.

Hitler tried to complete his wars of conquest while avoiding the intervention of the United States. As this book demonstrates, Roosevelt's slow change from an isolationist to interventionist put the United States in the Battle of the Atlantic without a declaration of war.

Dr. Paolo E. Coletta
U.S. Naval Academy
Annapolis, Maryland

The Armies of Ignorance: The Rise of the American Intelligence Empire by William R. Corson. New York: Dial Press, 1977, x + 640 pages, \$12.95.

American Espionage: From Secret Service to CIA by Rhodri Jeffreys-Jones. New York: Free Press, 1977, xi + 276 pages, \$12.95.

Beyond Top Secret U. by Ewen Montagu. London: Peter Davies, 1977, 192 pages.

These three books about intelligence in warfare are written respectively by a practitioner, a practitioner-observer, and an analyst.* The practitioner, Ewen Montagu, has written the shortest, most security-conscious, and the most informative of the three. He is now an English judge as well as a leading member of the Anglo-Jewish community. During the World War of 1939-45, he was in the Royal Navy and served as the naval member of the now famous—then deadly secret—XX or Double Cross Committee. It was this organization's task to take over the agents the Nazis sent to Great Britain and to play back their communications to Germany in such a way that the Germans never realized how they were being deceived.

Montagu, in addition, was in charge of a celebrated

* Author's note: That is a man who did the job; a man who did the job and then watched others doing it; and by an outside commentator.

feint, the operation called "Mincemeat." This was the floating ashore in southern Spain in the spring of 1943 of a body, dressed as a major, Royal Marines, which carried papers that helped to mislead the Germans about where the Allies were going to strike next in the Mediterranean. This tale was revealed in a novel by Duff Cooper (Lord Norwich), who had heard of it at the time as a politician, so inaccurately that Montagu got leave to publish in 1953 *The Man Who Never Was*, his excellent, detailed account of the operation.

Now that so much more has been made public, Montagu can write more freely about how deception was organized in wartime London and what a crucial part was played in it by deciphered German signals that passed by the supposedly indecipherable Enigma signal machine. One of his most telling passages explains how he maintained the necessary degree of secrecy for such projects as Mincemeat by basing them in the Admiralty. In the War Office or the Air Ministry, every incoming signal went automatically to some thirty branches, for the head of each of them liked to keep his finger in every current army or air force pie. In the Admiralty, anything addressed "Personal for Lieut-Commander Montagu NID 17M" went only to him. On the other hand, in John Godfrey he had a Director of Naval Intelligence capable of disobeying orders, who made sure that Montagu saw all the Enigma traffic and chiefs of staff papers he needed for his work, whether Godfrey was authorized to disclose them to him or not.

In America these things are handled differently. Rhodri Jeffreys-Jones's (the commentator's) book, subtitled "From Secret Service to CIA," covers American espionage activity from the Spanish-American War of 1898 to the formation of the Central Intelligence Agency nearly fifty years later. He wrote mainly from other people's books, but has made good use of the Secret Service and other relevant archives in Washington and has dug out a few points of novelty and interest. For instance, he established that W. Somerset Maugham the novelist's efforts on behalf of British intelligence in Russia in the summer of 1917, belittled by their central character in Maugham's *Ashenden*, were of some real use both to his direct employers and to the Americans.

He has worked also on the identity of the Americans' "K," who worked into the Balkans in 1944, not, as has sometimes been conjectured, Admiral Canaris, the head of the enemy Abwehr, but a Bulgarian businessman then based in New York called "Angel Kouyoumdjisky." Kouyoumdjisky's efforts to get Bulgaria to adopt a pro-American rather than a pro-Russian stance were probably foredoomed to the failure they obtained. Mr. Jeffreys-Jones should not have fallen for the legend, now utterly disproved, that deciphered

Enigma messages gave Churchill adequate advance warning of the raid on Coventry, of which Churchill made no use in order to safeguard the source; this is a permanent intelligence problem, but in this particular case it did not apply.

William R. Corson, who comes from Chicago, rose to lieutenant colonel in the United States Marine Corps before he retired. He fought in the World War of 1941-45, Korea, and Vietnam, mainly in intelligence assignments. Corson has also worked for various White House personalities and was an unofficial adviser to Senator Church's committee investigation into the American intelligence establishment. This gives him an insider's view over the mysteries of the secret world, from which the common newspaper reader, aircrew member, or junior staff officer is supposed to be shut out.

A very long chapter, tucked away as an afterword, sketches American intelligence activities from Washington's day through Pinkerton's to 1917. Much of the book, subtitled "The Rise of the American Intelligence Empire," takes the problem of how new presidents are briefed about what is going on in secret — what they are told and what is kept from them — and he goes through their successive experiences from Truman to Carter in detail. He combines published sources, archives, inside knowledge, and a keen nose for a story. This last quality sometimes predominates. Not all his former superiors will read this book with equanimity, and some will wince. As a work on military politics, it has considerable interest and topicality.

Michael R. D. Foot
London, England

Those Wonderful Women in Their Flying Machines: The Unknown Heroines of World War II
by Sally Van Wagenen Keil. New York: Rawson, Wade, 1979, index, x + 316 pages, \$10.95

Sally Van Wagenen Keil, in *Those Wonderful Women in Their Flying Machines*, not only provides the history of the Women's Airforce Service Pilots (WASP) Corps of World War II but entertains the reader with accounts of the enthusiasm, ambitions, and disappointments in the flying experiences of these female pilots.

Hired as Civil Service employees rather than active duty military, the WASP trained and flew every type of war plane available at the onset of World War II. Confined to flying only in the United States, they were assigned to and even volunteered for risky flying missions (search and rescue, towing targets, ferrying new or testing repaired aircraft), relieving male pilots

for overseas combat missions. But their status was not always glamorous, nor were they personally accepted: the all-male military bases were not prepared to billet females, flight uniforms were designed for men, and many men were not ready to accept these "powder puff pilots."

Even though the WASP were capable, courageous, and filled a need, and even though many of them died in the war effort, the program was canceled with little fanfare. The author does add an epilogue, however, ending on a cheerier note — thirty years after the war, in 1977, the once forgotten WASP of World War II were finally granted veteran status.

Though not necessarily for the general history library, *Those Wonderful Women in Their Flying Machines* constitutes an interesting footnote to history, documenting an early activity in which woman capably held her own in a man's world and with all too little credit at the time.

Tommye Jean Hall
Air University Review

Micronesia under American Rule: An Evaluation of the Strategic Trusteeship (1947-77) by Harold F. Nufer. Hicksville, New York: Exposition Press, 1978, 245 pages, \$15.00.

Micronesia under American Rule is based on eleven years of research and firsthand experience in Micronesia, an area relatively unfamiliar to Americans. The territory, however, was placed under U.S. trusteeship in 1947, and in his book Harold Nufer has graded American performance there.

Beginning with Spanish rule in 1494, through German, then Japanese, and, finally, American control, Nufer describes in great detail the progress that has been made in several crucial areas. All but the American eras are treated lightly, primarily by way of comparison; but the final result is a fairly comprehensive picture of an island republic covering an ocean area equal to that of the continental United States but with a total land area of only about 700 square miles.

Through extensive interviews on location, Nufer determined that the U.S. has made the greatest advances in educational and social development for the Micronesians, often building on the foundation left by former rulers. On the other hand, the failure of the U.S. directors adequately to promote economic self-sufficiency and a lack of work ethic on the part of many of the islanders have caused an economic lag.

Recent developments in Asia and the Pacific areas and the impending independence of Micronesia have caused this part of the world to take on a new significance in diplomatic circles. However, the economic

dependence of this area on the United States causes it to have current significance to all American taxpayers.

The military professional in a "shrinking" world does well by expanding his knowledge in areas of potential strategic importance, and events in Asia make a thorough understanding of *all* areas of the Pacific a must. This book requires careful reading, but the information obtained about this neglected part of our world makes the effort worthwhile.

Major Charles Ray, USA
Fort Bragg, North Carolina

The War Powers Resolution: The Role of Congress in U.S. Armed Intervention by Pat M. Holt. Washington, D.C.: American Enterprise Institute for Public Policy Research, 1978, 48 pages, \$2.25.

The American Enterprise Institute for Public Policy Research has produced another work addressing international issues. This time Pat M. Holt has examined the War Powers Resolution. Although the pamphlet is short, the author well illuminates the pressures that prompted Congress to adopt the resolution. Under it, the Commander in Chief can commit United States Armed Forces overseas for only sixty days without further congressional consent.

Holt identifies several problems. Foremost, he questions the ability of Congress to act quickly during a crisis. The resolution failed to designate who would speak for Congress during an emergency session with the President. Holt uses the evacuation of Saigon and the *Mayaguez* seizure to illustrate the complexity and rapidity of presidential responses to international emergencies. Most would agree with the author's pessimistic appraisal of Congress. Traditionally, it has enjoyed the luxury of second-guessing executive actions, while being notoriously indecisive over urgent issues. It should be remembered that Congress had ample opportunity to use its own powers (notably the power of the purse) to force a withdrawal from Vietnam. Its inaction allowed presidents from both political parties to conduct military operations with relative freedom. With that record it is difficult to accept the proposition that Congress would reach an early decision during a crisis.

The dilemma caused by the War Powers Resolution concerns all military personnel. Although intended to limit the ability of the President to commit troops against the will of Congress, the resolution could generate a situation in which American troops would be exposed to greater dangers. Previously the President

could quickly employ troops to stabilize a potentially explosive situation; if he hesitates (due to their resolution by Congress), the situation could escalate and become unnecessarily costly in casualties. This is why *The War Powers Resolution* is important to American armed forces.

Captain Andrew W. Smoak, USAF
USAF Academy, Colorado

South Africa: Sharp Dissection by Christiaan N. Barnard. New York: Books in Focus, Inc., 1977, 123 pages, illustrated, \$7.95.

In *South Africa: Sharp Dissection* Professor Christiaan N. Barnard, the born and bred Afrikaner who pioneered the heart transplant operation, uses his renowned medical accomplishments as a soapbox to proclaim that South Africa is being treated unjustly by the international community and "yellow journalism."

The arguments he uses are well-thought-out and at times very cogent; but, typical of most white South African views, they tend to emphasize a continued separation of the races. For example, it would be hard to deny that the international community is guilty of "politics of hypocrisy" in condemning and boycotting South Africa while recognizing more repressive and harsher African regimes than South Africa's. By failing to address the obvious point that these dictatorships are ruled by individuals representing a majority of the black population, Barnard's argument merely serves to point out that he, like most white South Africans, has failed to realize that the concept of racial minority rule is an anachronism in the latter part of the twentieth century.

Barnard tries to argue the need for rapid change in South Africa, but his shallow proposals for such change do not provide for a political transformation of South African society to majority rule in the near future. His plea that social discrimination must be eliminated immediately involves the removal of petty apartheid, i.e., separate rest rooms, restaurants, drinking fountains, etc. Unfortunately, his political solutions call for no such immediacy. Likewise, his call for the continued creation of separate homelands does not address the problems this proposal presents. Are the blacks to be forcibly resettled in these homelands? Are open frontiers going to be created with these homelands, or will travel permits be extended to the black manpower on which white South Africa so heavily depends? To what extent will these homelands be subservient to or dependent on South Africa? Until such questions are addressed, how can we believe these black homelands will become truly autonomous states? Barnard's most galling observation is that "the

white man on the whole is the most capable tribe in South Africa to govern South Africa." His proposal for a one-party state based on "merit" while blacks are being educated ensures continued white supremacy in South Africa for the near future.

This book offers very little in the way of new and useful information and realistic solutions to the many problems that South Africa faces today. Barnard's own perception that it is "distressing that intelligent men and women fail to look at the situation in an objective way" can be aptly applied to his own analysis.

Captain Richard S. Rauschkolb, USAF
USAF Academy, Colorado

Gods and Beasts: The Nazis and the Occult by Dusty Sklar. New York: Crowell, 1979, 180 pages, \$9.95.

Confronted with the awesome horrors inflicted on the world by Hitler and his regime, the student of history must necessarily choke when trying to find explanations. Writers have generally failed to explain how civilized, scientific, modern Germany could have hosted such bestiality. But Dusty Sklar, in *Gods and Beasts*, may have found a novel answer. It is not merely in the humiliating Versailles Treaty, in traditional anti-Semitism, or even in the desperation of depression life in Germany, writes Sklar, that the basis for the Nazi evil can be found. It is in something much deeper. Probing the mystical Teutonic past, Sklar finds connections between Aryan occult movements and the Nazi leadership. In astrology, paganism, Satanism, and similar mumbo jumbo, writes Sklar, Hitler and his kind found inspiration for their evil.

Writing about the young Hitler, in 1908 a flophouse bum in Vienna, Sklar notes the influences in Hitler's life:

Race, blood, and sex combined with ancient German occultism—spells, mysticism—to make an overrich Viennese pastry. Not many soup-kitchen derelicts, seeking an escape from their hopeless state, could resist such a package.

Sklar then builds his case: Hitler, Hess, Himmler, and other Nazi leaders were deeply involved in occultism. These allegations, which are readily verifiable from other sources, make for a convincing as well as unique explanation for the Nazi enigma. Sklar then compares Germanic occultism with the modern American cult movement. This latter comparison makes for a chilling, if not altogether convincing, conclusion to the book.

Captain N. D. Harmon, USAF
The Air Force Cadet Wing
USAF Academy, Colorado

Alfred Thayer Mahan: The Man and His Letters by Robert Seager II. Annapolis, Maryland: Naval Institute Press, 1977, 713 pages, \$24.95.

Robert Seager has produced the third major biography of Alfred Thayer Mahan; this one is the definitive biography of the man. Mahan, as every USAF officer knows, was the great American proponent of sea power and had a profound impact on his own times. Some of the air power advocates among us who are not fond of service on the flight line will doubtless take comfort in a less-well-known fact about Mahan: he disliked sea duty intensely and often did all that he could to avoid it.

Unlike too many biographers, Seager is not enamored with his subject. He gives us Mahan as a real person, warts and all. He is portrayed as a child of his age, typical of the conservative side of American progressivism. As a military theorist, he was less the innovator than the publicist, and his interpretations lean toward those of Jomini and toward war as a science rather than an art—hardly remarkable for a Social Darwinist, WASP imperialist.

The book is a comprehensive and fair treatment, fully documented. There is a welcome bit of subtle humor and a less welcome bit of editorializing. Mahan's main point was that command of the sea was the essential first step to national greatness; though Douhet denies the value of history, the very title of his book, *The Command of the Air*, suggests a debt to Mahan. Thus, this biography, or Mahan's own *The Influence of Seapower on History*, should be high on the reading list of the professional officer.

Lieutenant Colonel David R. Mets, USAF (Ret)
Fort Walton Beach, Florida

In Search of History by Theodore H. White. New York: Harper & Row, 1978, 561 pages, \$12.95.

From the pen of one of America's most accomplished and vividly descriptive narrative journalists comes this extremely readable and fascinating journey through the United States from 1915 to 1976. Theodore White has kept us alert after each presidential campaign with his "Making of the President" series. Now he alerts us to the history he has witnessed in his sixty years.

In Search of History is personal history. Novelist Thomas Wolfe long since told us we "can't go home again," but White has tried to go home; the resulting nostalgic trip down his Boston street (now all tattered and torn) to his worn-down birthplace is poignant. However, in the larger sense, America has opportunity. America has heroes, and America had "great

men who could move affairs to the good." White is in love with the American story; you will love *his* American story.

T.M.K.

War on the Mind: The Military Uses and Abuses of Psychology by Peter Watson. New York: Basic Books, Inc., 1978, 534 pages, \$17.50.

The use of psychology by the military has been an active and debated area of discussion since World War II. Extending to many different nations, military psychology has come of age during the last twenty years, especially in the United States where most of the research is taking place. In *War on the Mind*, Peter Watson brings together and analyzes the more important and controversial elements of the wide range of studies dealing with the military potential of psychology. He examines five central topics: combat, stress, the determinants of loyalty and treason, survival, and the psychology of counterinsurgency.

Air Force personnel will find Watson's discussion of command interesting. Watson sees a distinction between command and leadership, but I would lump the two together and draw the distinction between command and leadership on the one hand and management on the other and would agree that "the distinction is more important now than ever." (p. 152) His chapter on "Atrocity Research" is most fascinating but disappointing. He touches on the psychological conditions of war leading to atrocities, yet nine pages hardly do justice to this important topic. And the chapter on "Captivity" misses an opportunity to analyze the Vietnam experience from material certainly available by the publication date. On the other hand, the discussions of "Brainwashing" in Korea and "The Psychology of Counter-Insurgency" (especially in Vietnam) are good and would be valuable to those interested in these relevant topics.

With current interest on the impact of psychology on the military, including recent exposés on mind control, Peter Watson brings the reader a perspective about his own field of psychology. Assuming war is bad, why should psychologists dirty their hands? Their action is justifiable, he claims, "only when it is used to conserve life or if it is in response, direct or anticipated, to some new threat." (p. 18) The studies he analyzes "are defensive in character, aimed at conserving life rather than the reverse." (p. 42) A true comment, but one might interpret it as a rationalization. The author also presents a challenge to the American Psychological Association and its members to cooperate more on the study of military psychology and consolidate their research efforts.

War on the Mind is an informative work, covering a variety of topics and providing many thought-provoking ideas for military professionals on how psychologists attempt to improve military capability. It is valuable as an encyclopedia or reference book from which one can pick and choose chapters that seem interesting or relevant. It has its weaknesses, but these should not detract from its usefulness as an important survey.

Major Alan M. Osur, USAF
USAF Academy, Colorado

Eurocommunism: The Italian Case edited by Austin Ranney and Giovanni Sartori. Washington, D.C.: American Enterprise Institute for Public Policy Research, 1978, 196 pages, \$4.75.

Eurocommunism: The Italian Case is a conference report containing eleven papers that examine the historical growth of communism in Italy, the present state of the Communist Party, current Italian politics, and implications for American foreign policy. The overall theme is that Communist rule in Italy may turn into an unmitigated disaster for the whole Western world.

Air Force personnel may not want to read all of this book, but there are a few chapters that should be read by anyone interested in the major political forces shaping Western Europe. For example, in chapter ten author Giovanni Sartori, of Stanford University, poses the question, "Why has the PCI [Italian Communist

Party] not forced its way into the government since the 1976 election?" It could but does not want to until it can achieve international legitimacy. Italy lives by industrial transformation, has no important natural resources, and can produce only about 20 percent of its own food supply. However, its 55 million people have tasted prosperity, and their level of expectation is high. Owners of private capital always seek safety by running if they feel threatened, and the PCI believes this would happen if it came to power before it is internationally legitimate. The ensuing economic disaster would destroy the PCI. Essentially, the required legitimacy must come from the attitude of the United States.

In the final chapter, Henry Kissinger makes a strong case that, in spite of what the Communist parties of Western Europe say, they are not democratic. They would, moreover, destroy NATO and the Common Market, which they perceive only as institutions that enhance and protect the capitalism and imperialism of the bourgeoisie. He seems to see Communist rule in Italy as initiating a kind of domino effect that would wreck the major institutions on which a free Europe and a free world are built.

Of course, all this may not happen; but the central question is one of risk, and the authors of this book make the case that the risk is high. Moreover, it is not a risk that we have to take if someone can convince us in time that Eurocommunists have not turned into Social Democrats.

Lieutenant Colonel Michael J. Collins, USAF
Air Command and Staff College
Maxwell AFB, Alabama



The Air University Review Awards Committee has selected "Close Air Support in Modern Warfare" by Wing Commander Jeremy G. Saye, Royal Air Force, as the outstanding article in the January-February 1980 issue of the *Review*.

the contributors



Colonel F. R. Stevens, Jr., USA, (B.S., USMA; M.A., Columbia University) is in the United States Mission, NATO. He has served in U.S. Army artillery units in the Far East, Europe, and continental United States and held a number of high-level staff positions, primarily in the operations field. He commanded a Nike air defense missile battalion in Florida and completed a tour of duty in the Strategic Operations Division of the Organization of the Joint Chiefs of Staff. Colonel Stevens is a graduate of Air War College.



Lieutenant Colonel Wolfgang W. E. Samuel (B.S., University of Colorado; M.B.A., Arizona State University) is International Political Military Affairs Officer assigned to DCS Operations, Plans, and Readiness, Hq USAF. He is a master navigator with over 2800 flying hours. From 1969 to 1973, he was stationed at Hq

USAFE as a command air operations staff officer and flight safety officer. He was Air Force Research Associate at the Center for International Studies, Massachusetts Institute of Technology. Colonel Samuel is a Distinguished Graduate of Squadron Officer School.



Major Robert C. Ehrhart (Ph.D., University of Texas, Austin) is Associate Professor of History at the USAF Academy, where he has taught courses in general military history and the history of military thought. He is currently attending Armed Forces Staff College at Norfolk, Virginia. He has been a weapons controller in TAC, Vietnam, and in EC-121s. Major Ehrhart is editor and coauthor of *Modern Warfare and Society* (USAFA, 1979) and coeditor of *Air Power and Warfare: Proceedings of the Eighth Military History Symposium*. He has previously contributed reviews to this journal.



Williamson Murray (B.A., M.A., Ph.D., Yale University) is Professor of European Military History, Ohio State University. He is a former Air Force maintenance officer, having served in the USAF from 1964-69. Dr. Murray has written for *National Review* and several short articles for publication.



Major Donald J. Alberts (USAFA; M.A., Georgetown University; M.S., University of Southern California) is Planning and Programming Officer, Doctrine and Concepts Division, Hq USAF. Previously he served in PACAF as a Wild Weasel pilot. Major Alberts taught political science at the Air Force Academy from 1971 to 1975. He is coauthor and coeditor of *Political Violence and Insurgency: A Comparative Approach and Insurgency in the Modern World* (forthcoming). Major Alberts was author of the outstanding *Review* article published 1977.



Lieutenant Colonel Denis D. Umstot (Ph.D., University of Washington) is Director of Institutional Research for the U.S. Air Force Academy, Colorado. He has been assigned to a variety of line and staff jobs including base supply officer, military assistance plans officer, advisor to the Vietnamese Air Force Depot, and logistics plans officer. He was formerly an associate professor of management at the Air Force Institute of Technology, where he taught courses in organizational behavior and organization development.



Lieutenant Colonel William E. Rosenbach (Ph.D., University of Colorado) is Associate Professor of Organizational Behavior and Leadership and Director, Organizational Behavior and Leadership Division, Department of Behavioral Sciences and Leadership, USAFA, Colorado. His assignments have included duty as missile systems instructor, C-130 navigator, and management analyst at the Air Staff.



Colonel Orin C. Patton (Ph.D., University of North Carolina) is Director of Personnel Procurement, Hq Air Force Military Personnel Center (AFMPC), Randolph AFB, Texas. Colonel Patton was Commander, Detachment 90, Air Force ROTC (ATC), Colorado State University, Fort Collins, Colorado, prior to his assignment to AFMPC.



Major Kenneth W. Engle (M.A., American University) is Assistant Professor of Aerospace Studies, Colorado State University, assigned to Detachment 90, Air Force ROTC (ATC). He was Director of Operations, Iraklion AS, Crete, Greece, USAF Security Service. Major Engle is a Distinguished Graduate of Officer Training School.



Mostafa Rejai (Ph.D., University of California, Los Angeles) is Professor of Political Science at Miami University, Oxford, Ohio. He is author of *The Comparative Study of Revolutionary Strategy* (1977) and *Leaders of Revolution* (1979), and his articles and reviews have appeared in professional journals in the United States and Europe. Dr. Rejai is a fellow of the Inter-University Seminar on Armed Forces and Society and an associate editor of *Journal of Political and Military Sociology*.



James H. Toner (Ph.D., University of Notre Dame) is Assistant Professor of Government at Norwich University and a fellow of the Inter-University Seminar on Armed Forces and Society. He was an assistant professor at Notre Dame, where he taught international relations. Dr. Toner served as an officer in the U.S. Army from 1968 to 1972. In 1973, he was selected as a General Douglas MacArthur Statesman Scholar. His articles and reviews have appeared in *Army*, *Military Review*, *Review of Politics*, *International Review of History and Political Science*, and *Naval War College Review*.



Captain Daniel T. Kuehl (M.A., Temple University) is assigned to the 321st Strategic Missile Wing at Grand Forks AFB, North Dakota, as a Minuteman missile crewmember. Past assignments include Incirlik, Turkey, where he was Command Historian for The United States Logistics Group (TUSLOG), and Maxwell AFB, Alabama, where he was a staff historian at the Albert F. Simpson Historical Research Center. Captain Kuehl is a previous contributor to the *Review*.

editorial staff

LIEUTENANT COLONEL JOHN F. GUILMARTIN, JR., USAF
Editor
MAJOR THEODORE M. KLUZ, USAF
Associate Editor
JACK H. MOONEY
Managing Editor
JOHN A. WESTCOTT
Art Director and Production Manager
ENRIQUE GASTON
*Associate Editor,
Spanish Language Edition*
LIA MIDOSI MAY PATTERSON
*Associate Editor,
Portuguese Language Edition*
WILLIAM J. DEPAOLA
Art Editor and Illustrator
RUDOLPH W. MORGAN
Financial and Administrative Manager

advisers

MAJOR GENERAL JOHN W. HUSTON, *Chief
Office of Air Force History*
COLONEL ROBERT J. O'BRIEN, JR.
Hq Air Force Systems Command
LIEUTENANT COLONEL DAVID J. SHEA
Hq Air Training Command
DR. KENNETH J. GROVES
Hq Air University (ATC)
COLONEL LOUIS A. TORRACA, JR.
Hq Military Airlift Command
FRANCIS W. JENNINGS
Air Force Service Information & News Center
COLONEL DAVID O. SCHILLERSTROM
Hq Strategic Air Command
COLONEL JOHN H. PRICE
Hq Tactical Air Command
LIEUTENANT COLONEL ROBERT W. HUNTER
Hq United States Air Force Academy
PROFESSOR I. B. HOLLEY, JR., *Duke University
Major General, Air Force Reserve*
COLONEL GLENN E. WASSON, USAF (Ret)
LIEUTENANT COLONEL DAVID R. METS, USAF (Ret)

attention

The *Air University Review* is the professional journal of the United States Air Force and serves as an open forum for exploratory discussion. Its purpose is to present innovative thinking concerning Air Force doctrine, strategy, tactics, and related national defense matters. The *Review* should not be construed as representing policies of the Department of Defense, the Air Force, Air Training Command, or Air University. Rather, the contents reflect the authors' ideas and do not necessarily bear official sanction. Thoughtful and informed contributions are always welcomed.

Address manuscripts to Editor, *Air University Review*, Bldg. 1211, Maxwell AFB, AL 36112. Printed by Government Printing Office. Address subscriptions to Superintendent of Documents, GPO, Washington DC 20402; yearly \$13.00 domestic, \$18.25 foreign; single copy \$2.25 domestic, \$2.85 foreign, Air Force Recurring Publication 50-2. Authority to publish this periodical automatically expires on 30 January 1982 unless its continuance is authorized by the approving authority prior to that date. Distribution: reader-per-copy ratio is one to every ten USAF personnel, military or civilian.



The Professional Journal of the United States Air Force