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the indirect approach

Five times in the past three quarters of a century, large, tactically powerful, and essentially uncommitted military forces have faced one another across the length of Europe: prior to World War I, following the failure of maneuver warfare in the autumn of 1914, during the *Sitzkrieg* of the winter of 1939-40, before Hitler's invasion of Russia in 1941, and prior to the definitive Allied invasion of Europe in 1944. A sixth instance might be added to the list: the present.

In each of these confrontations, an identical and very basic question confronted opposing planners: the center, or the flanks?

Obviously, we are dealing with abstractions of a high order. In each case, detailed planning considerations involving opposing force balances and maneuver options, logistics, political objectives, and so on occupied the bulk of the planners' time. Nevertheless, geography exerted a pervasive influence in channeling the efforts of planners and narrowing their options. It still does: Why else our continued fascination with the Fulda gap and the North German Plain?

The idea of geographic determinism in military affairs is hardly new. Nearly a century ago, the great architect of seapower, Alfred Thayer Mahan, suggested the action of enduring mechanisms of this sort in reference to the battles of Actium (31 B.C.) and Lepanto (A.D. 1571). Both were naval engagements fought for dominance of the Mediterranean basin. Both involved competition between a maritime empire based in the eastern Mediterranean and one based in the western Mediterranean. Separated in time by sixteen centuries, they were fought at locations only a few miles apart. Nearer at hand, there is surely more than coincidence in the fact that Germany plotted the main axis of a major westward offensive action through the Ardennes forest three times in thirty years: the route into Belgium taken by Moltke the Younger's right wing in August 1914 lies only a few miles north of that plotted by Manstein for Guderian's Panzers in May 1940 and that taken four and a half years later by Sixth Panzer Army's *Kampfgruppe Peiper* in the Battle of the Bulge. Too much could be made of this: The selection of the German thrust point in 1914 rested on the desire to avoid violating Dutch neutrality; the corresponding decisions in 1940 and 1944 hinged largely on issues of deception. Still, the influence of basic geographical considerations was clearly operative at the strategic and grand tactical levels. There is no reason to suppose that such factors are not operative today.

Given the relevance of enduring geographic factors to the employment of military forces, what does historical precedent have to say about the current situation in Europe? In 1914, French planners assumed that the decisive battle would come in the center, in Alsace-Lorraine; their German opposites intended to achieve decision in a broad sweep around the northern flank. Both were off the mark. In 1940, the *Wehrmacht* went north into Denmark and Norway before turning westward against France and the Low Countries, Allied expectations to the contrary. In 1941, Hitler found it necessary to deal with Yugoslavia and Greece before turning eastward against Russia. The definitive Allied invasion of June 1944 came, as the Germans had anticipated, in the center, that is on the French coast, but only after Allied operations in the Mediterranean had engaged and pinned down most of the German strategic reserve.

The record, then, suggests that our fascination with the central region of NATO should be balanced with a strong dash of skepticism. There is ample reason to argue from the record that the center must be secured, but precedent also suggests that decision in the center is generally preceded—if not preempted—by decision on the flanks. Precedent further suggests that political volatility on the flanks can be expected to play a major role in dictating the timing and direction of a major offensive thrust, a thought that gives peculiar relevance to our lead article.



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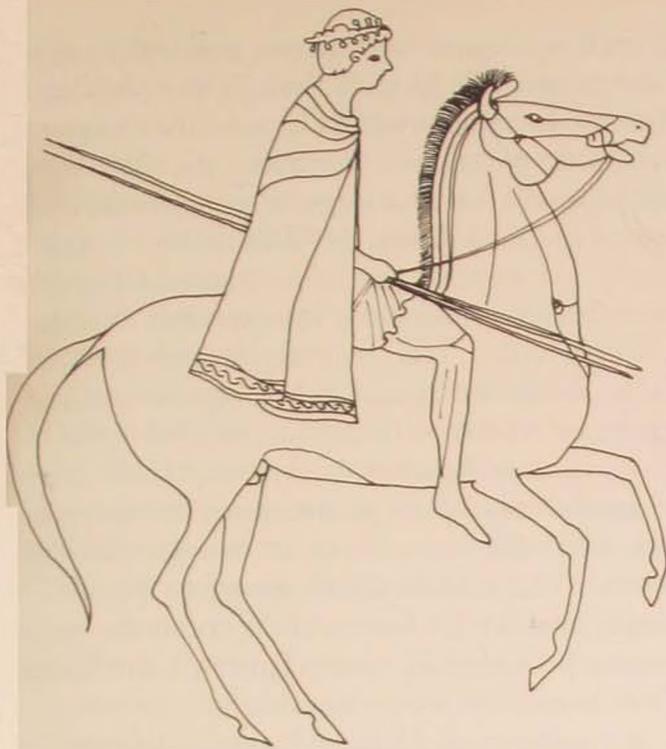
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The cover: Our illustrator symbolically depicts the uncertainty and challenge of NATO's southern flank in the guise of a Greek warrior of Alexander's day and an Ottoman Turkish *sipahi* (spahi) of the sixteenth century.



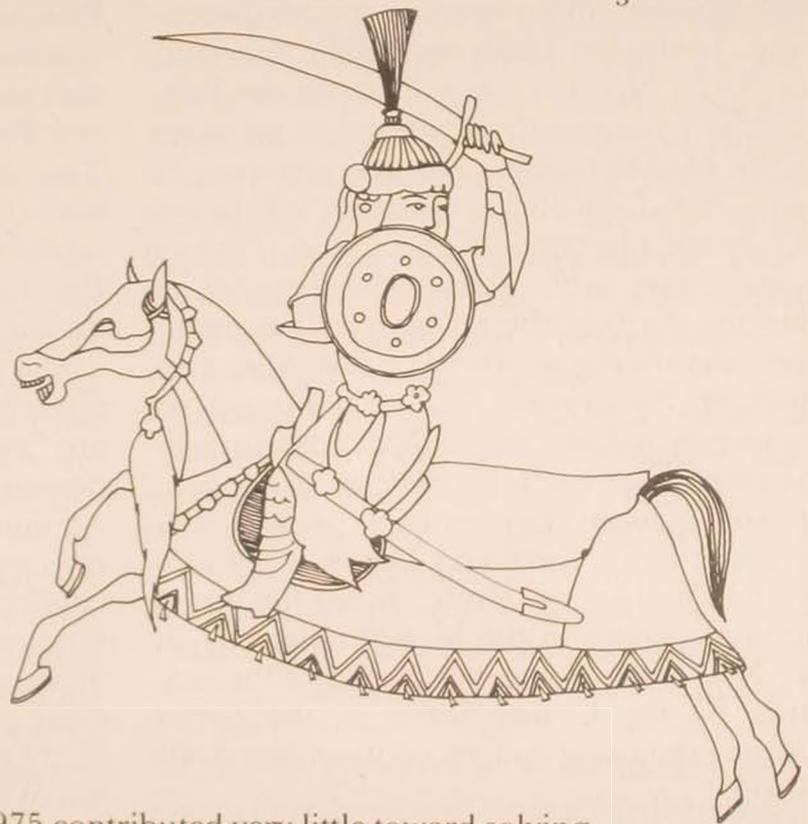
... if you're going to get into trouble anywhere in NATO today, you're going to get into trouble on the flanks ... particularly in the southern, where there are so many scenarios, areas of unrest and involved situations that could erupt virtually overnight.

Admiral Harold E. Shear
Commander, AFSOUTH

CHALLENGES AND UNCERTAINTY

NATO's southern flank

DR. JAMES BROWN



AT A TIME when the United States is making concerted efforts to bolster the NATO defense effort, especially on the central front, the southern flank of the alliance has fallen into disrepair. On the one hand, bilateral relations between the United States and Greece and Turkey, since the late 1940s, have evaporated for the most part. The U.S. embargo on arms to Turkey in 1975 contributed very little toward solving the Cyprus problem. The situation continues to fester and poison relations between Greece and Turkey, and it, in turn, exacerbates tensions over issues in the Aegean Sea. On the other hand, Greece has withdrawn from NATO's military structure, and Turkey questions its commitments to the alliance and its tilted position toward the West. Finally, domestic trends in both countries raise fundamental questions regarding the viability of their democratic institutions and the possibility of military intervention.¹

The Military Balance

These developments are primary factors in the disarray of NATO's southern flank in the last decade. However, the changing military balance has added a new dimension to the problem.

From the standpoint of security, geographic characteristics between NATO's central front and its southern flank make sea power a critical component for resupply and reinforcement of ground forces. This circumstance, of course, underlines the need for effective sea control; otherwise, coherent defense of the southern flank is difficult, if not impractical.

For many years, the U.S. Sixth Fleet operated virtually unhindered in the Mediterranean. In the late 1960s and 1970s, however, the Soviet Mediterranean Fleet, or the Fifth Escadra,² has greatly expanded its presence in the Mediterranean, and this presence, in turn, has facilitated promotion of Soviet diplomatic objectives in the region. From a coastal navy with a principal mission of showing the flag, the Soviet navy has developed significant sea-denial capabilities.³ In short, the Soviet naval buildup has produced an uneasy balance in the Mediterranean in the sense that the United States no longer exercises undisputed control in the area. On the other hand, the Soviet Union is not in a position to deny the United States the use of maritime routes in the Mediterranean or in the Near East. Control or denial of the sea-lanes by the United States or the Soviet Union ultimately hinges on land-based air power.

Although the Soviet navy could inflict major damage in the event of general war, it has lacked effective sea-launched and land-based air power in the area. But with the introduction of the Backfire bomber to Soviet naval aviation, the Mediterranean basin has become vulnerable to attack. This underscores the importance of land-based tactical

aircraft stationed in Europe, particularly in Greece and Turkey. Although the Warsaw Pact far exceeds the NATO countries in total numbers of tactical aircraft, the Western alliance still has the edge in equipment and fighting capabilities. NATO today is currently bringing many new types of fighter aircraft (e.g., Tornado) into service, and the United States has recently augmented its F-15, F-16, A-10, and F-111 squadrons and equipped them with advanced laser-guided and precision-guided munitions.⁴ This level of modernization was necessary because of the introduction of new Soviet tactical aircraft (e.g., MiG-23/27 Flogger, Su-17/20 Fitter, and Su-19 Fencer).⁵ Without the protection provided by tactical aircraft, the Sixth Fleet is even more vulnerable.

A further complicating factor is the expansion and modernization of Soviet and Warsaw Pact land forces on the southern flank. This development gives the Warsaw Pact both numerical and technological advantages.⁶ Current estimates are that the Warsaw Pact nations have deployed some 33 divisions on the northern Greco-Turkish borders in contrast to NATO forces numbering some 25 divisions. Most of the Warsaw Pact divisions are mechanized and armored, and they possess a favorable tank ratio of three to one.⁷ Additionally, the Soviets have deployed intermediate-range ballistic missiles (IRBMs), including the 3-MIRV SS-20, in the northwest Crimea and in the northern fringes of the Transcaucasian Federation. Presumably, some of these missiles would be targeted on NATO's southern flank. In response to this Soviet action, the United States, with the approval of NATO, has proposed to deploy medium-range Pershing-2 missiles and cruise missiles in the territory of several allies (e.g., West Germany, Italy, Belgium, Great Britain, Netherlands) by the mid-1980s.

In contrast, much of the equipment used by Greek and Turkish forces is rapidly approaching obsolescence, and both countries

have begun massive modernization programs. But shrinking U.S. congressional support of federal military assistance credits and increased direct commercial sales have hindered these programs. This development imposes additional burdens on both countries, particularly Turkey, which has faced one of the severest economic crises in its modern history.

Furthermore, the arms embargo compounded these conditions and reduced the effectiveness of Turkey's armed forces in some areas by as much as 80 to 90 percent according to some estimates.⁸ The lifting of the arms embargo in September 1978 alleviated some of the most serious military problems facing Turkey. However, the need for modernization is so great that, even with full-scale resumption of U.S. military assistance, significant military weaknesses are likely to continue.⁹

The Political Dimensions

Despite shifts in the military balance on NATO's southern flank, military power may be irrelevant in resolving the problems facing the region. The Soviet Union, for the most part, has merely responded and reacted to the problems, which it did not create and has not resolved. The problems stem from social, economic, and political changes in Greece and Turkey and in the international environment over the past decade. An examination of these problems should aid in understanding the disarray on the southern flank of NATO and the Soviet Union's improved position in that area.

changed perceptions of the Soviet threat

In the first place, Greece and Turkey perceive that the immediate Soviet threat has declined in the eastern Mediterranean. Both countries generally view Soviet objectives in

the area as primarily political and the expanded Soviet naval presence as a natural extension of superpower interests. In fact, neither Greece nor Turkey perceives an immediate Soviet threat to its vital national interests.¹⁰ They have reasons of their own for downgrading the Soviet threat.

Their historical animosity surfaced over the Cyprus question in July 1974, and it has continued to simmer ever since. In their preoccupation with each other, their differences with the United States, and their disappointment in Western Europe's level of assistance, Greece and Turkey cast about in the international arena for supporters. Neither country presently fears a Soviet attack. Instead, both have responded favorably to Soviet overtures for improved relations, and high-ranking Greek and Turkish officials visited the Soviet Union in 1978 and 1979. Moreover, both Ankara and Athens advance the argument that, if the United States can seek détente with the Soviet Union, they can likewise seek détente. Thus, for the past decade, Greece and Turkey have experienced steadily improving relations with all their Communist neighbors.¹¹

Greece, for example, has intensified its relations with Yugoslavia at all levels, particularly in trade, tourism, industry, and economics. Relations with Bulgaria have been normalized and will continue to move in a positive direction as long as the borders remain quiet and the Soviet Union stations no troops there. Relations with Albania are cool but correct.¹² If the Albanians do not invite the Soviets to return to the naval base at Vlorë (their "window" on the Mediterranean until May 1961) and if Soviet policy toward Yugoslavia does not endanger the peace and security of the area, Greek officials will take a relaxed attitude toward Soviet naval activities in the Mediterranean. On the other hand, both Greece and Turkey will be outflanked and isolated from NATO if Moscow secures a foothold in Yugoslavia.

One can interpret Greece's relations with the Soviet Union in the last two years as part of an effort to diversify Greek foreign policy and reduce Greek dependence on the United States. Several high-level visits in the last two years culminated in September 1979 with Prime Minister Constantine Karamanlis's visit to Moscow.¹³ These visits brought no fundamental changes in the Soviets' posture: they would not support the issue of Cyprus or the question of airspace and seabed jurisdiction in the Aegean Sea. However, an agreement with Moscow does admit Soviet commercial and auxiliary combat ships for repairs at the Neorian Shipbuilding Company on the Island of Syros. Although this development has raised some consternation in Washington and NATO circles,¹⁴ Greek officials view Soviet naval deployment in the Mediterranean as part of U.S.-Soviet strategic rivalry in the Middle East and Africa and not as a direct threat to Greece's security.

To a greater extent than Greece's problems, recent troubles between Turkey and the United States have brought speculation about a possible "Soviet option." Historically, relations with the Soviets were a cornerstone of Kemal Atatürk's foreign policy, and Moscow constantly reminds Turkey of that fact. However, Turkey still remains wary in the light of centuries of hostility, thirteen wars, a common frontier, and Moscow's undiminished ambition to control the Dardanelles. But it is true that the Soviet Bear has been almost benign in their relations. Since the mid-1960s, Turkey has maintained good relations with Moscow; economic relations have greatly expanded, and government-to-government ties have improved.¹⁵ All major Turkish political parties have supported the conscious receptivity to Soviet overtures. The economic gains resulting from improved Turkish-Soviet relations represent one of the outstanding successes of Ankara's politics. Turkey presently receives more Soviet aid than any other Third World

nation, and Soviet aid compares favorably with aid currently given to Turkey by any Western nation.¹⁶

To date, Moscow has avoided linking economic aid to specific political demands. However, the 1978 Turkish-Soviet agreement, entitled *The Principles of Good-Neighborly and Friendly Relations*, did state that neither nation would allow the use of its territory ". . . for the commission of aggression or subversive actions against the other state. . . ." Literal interpretation of this clause would prevent the operation of U.S. and NATO surveillance bases along Turkey's northern frontiers. Turkey's sensitivity to these principles has surfaced in connection with verification flights by U-2s to monitor Soviet missile testing in compliance with SALT II. Ankara has sought U.S. assurances that flights over Turkey would be consistent with both American and Soviet interpretations of the "letter and spirit" of the agreement.¹⁷

Turkey bases its perception of a Soviet threat not only on Moscow's moderation but also on U.S. vacillation. Turkey has never forgotten President Johnson's warning to Turkish Prime Minister Ismet İnönü during the Cyprus crisis in 1964 that, if Turkey did not desist, it could not expect U.S. support in the event of a Soviet attack. During the late sixties and seventies, a host of issues have caused even more strained relations with the United States: port visits of the Sixth Fleet; differences over the pace and methods of modernizing the Turkish armed forces; and the progressive reluctance of the U.S. Congress to fund Turkish military and economic aid programs. The most serious cause of friction was the arms embargo in the aftermath of the Cypriot crisis of 1974. The Turks interpreted this congressional action as an unjustified slap at a NATO ally that has contributed heavily to collective defense over the years.

The embargo convinced Turkey that it

must reduce its dependence on the United States and pursue a more multifaceted foreign policy that would consider Turkey's unique geographic position and historical role as a bridge between East and West.¹⁸ In essence, U.S. foreign policy raised questions in the minds of many Turkish leaders regarding the reliability of the United States in the future. They felt that Turkish security was held hostage to the vagaries and peculiarities of U.S. domestic politics.

Turkish Prime Minister Bulent Ecevit, in September 1978, questioned the excessive relationships between U.S. internal and external politics:

Her external politics are very much (too much for a world power) influenced by the ethnic lobbies so that when an allied country has problems with the mother country of one of these lobbies, she finds herself in a hopeless situation vis-à-vis her relations with the United States, and sometimes even the United States Administration itself cannot help such a situation. I am not mentioning this peculiarity of American politics as a criticism, I am just stating a reality of our present day world which we have to learn to live with.¹⁹

One should view recent and future developments in Turkish foreign policy against this background. Although lifting the embargo has removed the most important irritant in U.S.-Turkish relations, additional adjustments in Turkey's foreign and defense posture vis-à-vis the United States are likely. One Turkish official described the situation in these terms:

The United States, through an arms embargo that was imposed on an ally for reasons that had little to do directly with the needs of the alliance, had done more to unhinge NATO's eastern flank than anything that the Soviet Union has done; and it has done so at a time when Washington has been trying to heighten concern and generate increased defense expenditures to counter the Soviet military buildup in central Europe.²⁰

instability of domestic politics

A second problem that contributes to a favorable environment for Soviet diplomacy

is the pervasiveness of petty domestic politics. The internal struggle for power in Greece and Turkey overshadows Soviet expansionism. In both Greece and Turkey, foreign policy is only an extension and reflection of domestic bickering and alignments. It revolves around the Greek-Turkish conflict and numerous complex and interrelated political, economic, and military strands. For the most part, politicians give strategic considerations a low priority and rarely mention them in or out of office. Thus, the cohesion of NATO is seldom discussed in political circles. Each party has some legitimate grounds for dissatisfaction with NATO members, especially the United States. "NATO is more a cudgel wielded by domestic opponents to embarrass and weaken the group in power than a shield against the Soviet Union, which, in any event, appears less a threat than one's neighboring ally."²¹

Greece. Andreas Papandreou, the leader of the opposition Panhellenic Socialist Movement (PASOK), openly exploits foreign policy for domestic purposes. He advocates total withdrawal from NATO and urges a policy of "anti-imperialist" nonalignment, coupled with a hard line toward Turkey over Cyprus and the ancillary issues pertaining to the Aegean Sea. He also rejects Karamanlis's total commitment to membership in the European Economic Community and tends to favor a loose association.²² Papandreou's militancy feeds his anti-Americanism and propensity toward nonalignment, which he sees as the proper affiliation for Greece. In a recent statement, he referred to the Syros Island affair as confirming ". . . in the bluntest way, US intentions against our country's national sovereign rights and against our national independence."²³

More specifically, deterioration of U.S.-Greek relations and the rise of anti-Americanism stems from two basic causes. The first was U.S. policy toward Greece under the junta. No evidence exists that the

United States engineered the 21 April 1967 coup d'état failure. The fact that the United States Government did not exert more energetic efforts to restore democracy undermined support for both the United States and NATO. The Johnson administration did suspend heavy arms and equipment shipments to the junta, but spare parts and light arms and munitions continued to flow. President Nixon's administration resumed shipments of heavy arms and equipment and sought to "homeport" elements of the Sixth Fleet in Piraeus. At the same time, high-level officials of the administration, including Vice President Spiro Agnew, visited Greece and received pronounced coverage in the local Greek newspapers. All of these elements contributed to the impression that the United States supported the junta, and this view is still widely held in Greece.

A second cause for the deterioration in relations was U.S. policy during the Cyprus crisis of 1974, particularly in the sense that many Greeks perceived a U.S. "tilt" toward Turkey, and this perception led to Greece's withdrawal from the NATO military structure. Today, many Greeks feel that the United States could and should have prevented the Turkish invasion of Cyprus and that Secretary of State Henry Kissinger was responsible for the slow U.S. reaction to the impending disaster. In part, this is a correct perception. Secretary Kissinger was so engaged in the events in Southeast Asia, the Middle East, and Watergate that positive and effective responses were too late. In fact, the Greek government under General Demitrios Ioannides was in such a precarious political and economic state that any firm U.S. action within the first three days of the ill-fated coup d'état and the assassination attempt on Archbishop Makarios would have easily toppled the Ioannides regime and, in turn, spared Cyprus of the Turkish invasion. This was not to be! The result was an outbreak of virulent anti-Americanism and an unavoid-

able response by the newly installed democratic government of Karamanlis. Under much public pressure, Karamanlis withdrew from the military structure of NATO and began a reassessment of U.S. relations. The reassessment led to the termination of the home-porting agreement and initiation of bilateral discussions over the future of U.S. installations in Greece.

These discussions culminated in the signing of a new Defense Cooperation Agreement in 1977. The Greek government has yet to sign the agreement, and it appears that it may not sign it. Apparently, Greece is using the bilateral agreement as a means of influencing the United States to find an acceptable plan for Greece's reintegration into NATO's military wing and to move Turkey toward some resolution of the Cyprus controversy.

The U.S. decision to lift the embargo on arms to Turkey, however, justified in terms of U.S. strategic interests has considerably complicated relations with Greece. And it has strengthened the domestic position of Andreas Papandreou and PASOK. Papandreou now argues that lifting of the embargo further confirms the pro-Turkish stance of the United States and the general bankruptcy of the Karamanlis government. A recent poll in the Athens and Piraeus²⁴ areas indicates that voters in these areas are undecided as to the future of Karamanlis and his government.²⁵ These findings are more pronounced for the 15 to 39-year-old group, the largest sector of the electorate.²⁶ Current speculation is that Karamanlis and his New Democracy party would be further eroded if elections were held within a year and if the present political climate remains the same.²⁷

In addition to the Cyprus question, two other issues further complicate Greece's relations with the United States, NATO, and Turkey. The first issue concerns the right to explore for minerals, primarily oil, beneath the Aegean Sea. Under international law, na-

tions have the right to explore for mineral wealth on their continental shelf, but the Greek islands and the Turkish mainland share the same shelf. The second issue concerns the right to control the air space over the Aegean. This latter issue was partially resolved when both Greece and Turkey, in February 1980, lifted restriction on civil aviation flights over this area. The question of the two countries' military flights in the area still remains deadlocked, awaiting settlement within the framework of NATO. These issues are more serious and potentially more explosive than the Cyprus dispute because they directly affect the sovereignty and vital interests of both countries.

There appears to be little question of Karamanlis's desire to return to the military wing of NATO. It is a feeling shared by Greece's military leaders. But Greece's relationship in NATO remains²⁸ at best uncertain, and solution depends on a number of factors.

The first requires the approval of Turkey, which to date has been unwilling to agree to the proposed terms of reintegration.²⁹ In large part, this is an attempt by Turkey to put pressure on Greece to resolve bilateral issues.

Second, Greece's domestic political situation of anti-United States sentiment remains strong and has to some extent even intensified since the lifting of the embargo.

Papandreou's electoral victory in 1977 continues to limit Prime Minister Karamanlis's flexibility in negotiating through this impasse. Papandreou has sharply attacked Greece's ties to NATO on the grounds that they result in a "loss of national independence" and make Greece "subservient to an outside power center."³⁰ As an alternative, Papandreou advocates close ties with the Third World and the development of an indigenous arms industry, and he has even suggested that Greece should consider acquiring nuclear weapons.³¹

A more basic question is this: What happens after Karamanlis? Karamanlis is now 76 years old; and, like a number of older men in power, he is either reluctant to train an heir apparent or is indifferent to the need for an heir. No clear successor is evident. The second most prominent person in Greece, in terms of public visibility, is Andreas Papandreou. If Papandreou's strength continues to grow, Greece's reintegration into NATO will be difficult. Karamanlis has stated that his aim is to

tie Greece to the West in a way that those who follow me can't break. This is why I worked so hard to get Greece into the Common Market and why I want us back in NATO. But I'm getting no support from Washington, and in Greece, opposition pressure against strong ties with the West is growing all the time.³²

If Papandreou comes to power in the near future, Greece would probably withdraw from NATO. One cannot exclude this possibility.

Turkey. Turkey is passing through one of the most difficult periods in its history. It has been wracked internally by crises that have severely tested its social order and democratic institutions. And, as pointed out elsewhere, it has become increasingly disillusioned with its Western ties—especially with the United States—and has considered reorientation of its foreign policy.

More specifically, the loss of 2100 lives in terrorist activities during the last two years has required imposition of martial law in 19 of the country's 67 provinces. Economic disorder is rampant as manifested in a 25 percent unemployment rate, an inflation rate of 70 percent, and an acute shortage of foreign currency reserves. This shortage has restricted importation of goods and raw materials and has cut industrial production to only 50 percent of capacity.³³ Kurdish and other ethnic and religious armed uprisings have undermined the viability of the political institutions.³⁴ Finally, prolonged parliamen-





Cyprus— a negative influence

Repeated outbreaks of violence in Cyprus led to the establishment of a United Nations peacekeeping force on the island in 1965. U.N. observation posts (facing page) were maintained there until 1974 to provide separation between the Greek Cypriot and Turkish Cypriot communities. . . . Control of the northern areas of Cyprus was assigned to the Canadians. Left, resupply to a Canadian U.N. mountaintop outpost. . . . U.N. patrols (below) tried to ease the tensions in these Cypriot communities.



tary deadlocks threaten at times to make Turkey all but ungovernable, and the specter of military intervention looms on the horizon.³⁵

These acute problems surfaced in the late 1960s. Thus, a polarization of Turkish political life has hindered the formation of stable and effective governments for more than a decade. The military ultimately entered the arena with the "coup by communiqué" in March 1971, and, from 1971 to 1973, military commanders approved the ruling governments of Turkey. Not until the fall of 1973 did the military withdraw into the wings and permit parliamentary elections. Since that time, two personalities and their followers have dominated Turkish politics: Bulent Ecevit's Republican People's party and Suleyman Demirel's Justice party.

Ecevit's party is the larger of the two parties and is supported by trade unions, small farmers, and urban intellectuals. His party favors a program of democratic socialism that emphasizes economic planning and elements of a welfare state. Demirel's party, on the other hand, is supported by business groups and large commercial farmers who emphasize *laissez-faire* in theory but, in practice, favor concrete benefits to various economic groups. Both parties continue to support Turkey's role within NATO, but this stance is subject to serious questions. In fact, all parties are closely scrutinizing Turkey's entire foreign policy toward the United States and the West in the light of the arms embargo and resulting economic problems.

Both Ecevit and Demirel harbor deep personal antagonism that compounds basic differences between the major political parties. These differences make it almost impossible to create a "grand coalition" for solving complex problems, and neither party alone can muster a parliamentary majority. Consequently, minor parliamentary groups exercise disproportionate influence and, even worse, cause deadlocks and ensuing paralysis

in the legislative process.³⁶

The elections of October 1979 brought about the ouster of Ecevit and his replacement by a parliamentary minority led by Demirel and his Justice party.³⁷ To gain a parliamentary majority, Demirel invited the "unconditional support" of the National Salvation party, the National Action party, and the National Order party. All of these are more hawkish on the Cyprus and Aegean Sea questions. This development will naturally affect a quick solution to the Cyprus issue and the return of Greece into NATO's military structure. But, in the final analysis, it will not bring ready solutions in either the domestic or foreign policy arenas.

An underlying factor in Turkey's reassessment of its Western orientation is the economic consequences of its Cyprus invasion.³⁸ Although justification for the invasion is still a matter of contention, the resulting impasse in Turkish-Western relations is unquestionable. The arms embargo imposed by the U.S. Congress on military aid caused, *inter alia*, a crisis in Turkey's modernization program and the closure of 26 U.S. defense installations on Turkish soil. Other contributing factors in Turkey's economic plight resulted from the financial reversals flowing from the economic recession of 1973-74 in Western Europe and, in the same period, the oil crisis that quadrupled oil prices and led to a sharp rise in Turkey's trade deficit (approximately \$3 billion in 1977). By 1979, Turkey found it difficult to meet payments for its monthly petroleum imports, and coffee, filter cigarettes, and similar goods had become black market items. Another by-product of the economic crisis is the curtailment of military purchases, which, in turn, has sapped Turkey's military potential. And the West has been slow in providing assistance partly because of the political impact of certain measures on Turkey's domestic problem³⁹ and political squabbling within Parliament.

Further alienation from the West came as

a result of Greece's entry into the European Economic Community (EEC). Turkey contends that she should also be considered for membership. Now that Greece has joined the EEC, how can the West European allies justify the inclusion of Greece in the EEC without also including Turkey? What will be the impact of this development of Greece's reentry into the military structure of NATO?

The United States has been slow in providing aid to Turkey because of disagreement between the Carter administration and Congress about the size of the American contribution and the amount that should be provided as aid and as a loan. Other differences have also arisen in the negotiation of a new economic and defense agreement. Turkey insists on a foreign aid agreement amounting to \$2.5 or \$3 billion, but the United States maintains that it cannot commit itself for a five-year period demanded by the Turks.⁴⁰ They have not forgotten the arms embargo, and, for this reason, they insist on clear U.S. commitments to provide uninterrupted and unreduced aid over a five-year period. Negotiations were consummated in January 1980 for continuing use by the United States of some 26 military and intelligence installations. This agreement also calls for approximately \$450 million for military and economic aid. These bases have assumed added significance with the verification of SALT II and loss of monitoring sites in Iran.⁴¹

These factors have raised questions in the minds of Turkey's political and economic elites concerning the wisdom of exclusive orientation toward the West.⁴² The Turks have gained some flexibility by reorienting their political and economic relations with neighboring states,⁴³ and this reorientation is the basis of Turkey's regional approach in solving its problems. Each step forward naturally challenges the soundness of Turkey's post-World War II relations with the West.

the politics of "benign neglect"

The third problem contributing to Moscow's improved position in the eastern Mediterranean is the feeling of neglect that permeates the Greek and Turkish societies. Most political leaders in both countries are convinced that NATO headquarters is so preoccupied with the central front and the ominous military buildup by the Warsaw Pact that it regards the southern flank as an ancillary theater of operations. Both countries believe that statements of concern voiced by NATO leaders are prompted by Greco-Turkish differences, namely, the Cyprus issue and the concomitant arms embargo on Turkey. The latter issue has affected Turkey's combat readiness.

Both Athens and Ankara are convinced that NATO does not take a serious view of the Soviet military buildup in the eastern Mediterranean. This perception can be understood in light of the decision regarding the allocation of AWACS (airborne warning and control system) aircraft. Although the exact figures are classified, NATO originally planned to purchase between 24 and 32 AWACS, the number considered as sufficient to guard against a surprise attack and provide surveillance over the entire defensive arc from Norway to Turkey.⁴⁴ But budgetary constraints permitted the purchase of only 18 AWACS aircraft.⁴⁵ Since only one aircraft in four is airborne at any one time, the reduced number will shortchange some sectors of NATO's defense perimeter. Speculation is that the eastern Mediterranean is the lowest sector on the priority list.⁴⁶ Further proof of American preoccupation with the central front is a paper prepared by the Congressional Budget Office which assumes that a Soviet attack will be launched through the northern German plains, the Fulda gap, and the Hof corridor. The report does not mention the southern flank.⁴⁷ Additionally, most scenarios played out by U.S. and NATO mil-

itary forces place major emphasis on the central front and show little concern for the flanks, particularly the southern flank.

Other developments have reinforced this Greco-Turkish perception of NATO's benign neglect. A report prepared by the Office of Program Analysis and Evaluation in the Department of Defense in 1978 suggests that "the outbreak of a war on either of NATO's flanks is either unlikely or impossible to successfully defend against. . . . and severely downgrades the possibility of any NATO war lasting longer than six months."⁴⁸ Several weeks later, Secretary of Defense Harold Brown, in testimony before a congressional committee, made this comment about the above report: "The commitment of the United States to Israel's security is unquestionable." He added, "*If* control of the Mediterranean were judged an appropriate planning objective."⁴⁹ Such an offhanded remark did very little to assure either Greece or Turkey regarding the intensity or reliability of U.S. commitments in the eastern Mediterranean. Professor Nermin A. Unat, a member of the Turkish Senate, commented on Turkey's treatment as an equal in NATO: "It is not a question of Turkey wanting to go neutralist, or be a neutral, or pro-Soviet. We belong to the West. But now we want to speak up as an equal partner in the Alliance and share full responsibility for its action."⁵⁰ If Greece and Turkey ultimately perceive that they are expendable or that they have no reliable allies, what will prevent them from seeking rapprochement with the Soviet Union? In that case, a "Finlandized" southern flank could become a new reality.

As indicated earlier, Moscow's policy toward Greece and Turkey has been a combination of olive branch and checkbook diplomacy—a disarming reasonableness and nonthreatening posture. Even so, the Soviets are not firmly entrenched in the Mediterranean.⁵¹ However, they could achieve a breakthrough if a succession crisis in

Yugoslavia should bring pro-Soviet leadership to power or if some Arab leader decided to grant them the privileges they enjoyed for some ten years in Egypt. If either scenario comes to pass, it might spur Greece and Turkey toward a reconciliation, and NATO would respond with intensified rearmament, an alternative that Moscow seeks to prevent.

ALTHOUGH six years have elapsed since the Cyprus dispute, the southern flank is still marred by fissures. Despite major concern voiced by political and military leaders on both sides of the Atlantic, there is little evidence that the problems are receiving systematic and creative attention. Many of the concepts and axioms that lay at the heart of the U.S.-NATO-West European approach to the region are carry-overs from the late 1940s and 1950s. Today, they do not provide an adequate foundation for policy toward a region in a state of rapid social, economic, and political change.

In the complex milieu of the late 1970s and 1980s, alarmism regarding the growing Soviet threat is not an effective source of policy. This does not imply that the Soviet threat no longer exists, but the threat today is less immediate and less direct. More important, neither Greece nor Turkey regard it as the principal source of their insecurity. A need for an assertive and cooperative policy among the Allies spills over into the Greco-Turkish imbroglio. This type of assistance will blunt any Soviet attempt to exploit the instabilities, both real and latent, on the southern flank. Such a policy is even more important in view of the potential for instability elsewhere in southern Europe, namely, in Yugoslavia following Tito's demise.⁵² If Yugoslavia "tilts" toward the Soviet Union, the southern flank would be isolated from its other NATO members.

The domestic political scene in Greece and Turkey does not permit imaginative moves by their political leaders in reconciling

differences. In fact, the leaders of both countries are quite likely to seek greater autonomy in foreign relations, much to the dislike of NATO and the United States. The United States can hardly prevent this development, and it should not attempt to prevent it. Any such action would further alienate Greece and Turkey and further weaken their ties with the West. U.S. leaders should recognize these shifts in policy as concomitant developments resulting from an ever-changing domestic and international environment. How can the United States and NATO channel and guide these efforts in directions that will enhance the security of both nations without undermining the alliance as a whole? The key to an effective NATO and a viable southern flank is to ensure smooth and harmonious relations among all components of the alliance.

Although lifting the arms embargo was the first step toward achieving harmony with Turkey, the action did very little to reassure Greece that the United States was still not continuing to "tilt" toward Turkey. Perhaps a lesson in Camp David diplomacy would be appropriate! The differences between the two countries are so deep and politically motivated that only intensive and sustained negotiations can resolve them. Resolution of such intractable issues cannot be achieved on a sporadic, piecemeal basis.

Both Greece and Turkey must be assured that they are valued members of the Western community, and they must share goals that include but extend beyond the narrow boundaries of national security and regional settings. Only under such conditions will both countries make positive contributions to collective defense, and only under such conditions will the United States be able to repair the fissures in the southern flank and reestablish genuine cooperative relations with both allies.

We may now be at the watershed when NATO objectives in the eastern Mediterranean are better served by greater attention to political, rather than military, means. This is especially significant because of the potentially explosive situation in the Middle East. As a result, the eastern Mediterranean now takes on additional significance as one of the most strategically important sea areas, and any reduction in U.S. or NATO strength shifts the balance of power toward the Soviet Union. The key to a secure Mediterranean rests in a stable and durable southern flank.

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A special note of thanks to John C. Smith for his invaluable comments and suggestions.

Notes

1. Both nations have experienced military intervention in the last ten years: Greece, 1967-74; Turkey, 1971-73.
2. The typical naval force varies from 10-12 surface ships, 8-12 submarines, 15-20 auxiliary ships, and 5-7 intelligence ships. See Ken Booth, "Superpower Naval Disengagement in the Mediterranean," *Journal of the Royal United Services Institute for Defence Studies*, June 1979, pp. 28-35.
3. While the Soviet navy could inflict great damage on the NATO naval forces in the event of general war, it lacks effective sea-launched and land-based air power in the area. So long as the Western powers control the "choke" points in the Mediterranean and possess strong land-based air power, the Soviet naval forces will find it difficult to survive in any kind of military showdown. For a detailed discussion of Soviet naval buildup, see Barry M. Blackman, *The Changing Soviet*

Navy (Washington, D.C.: The Brookings Institution, 1973); see, also, Maurizio Cremasco, "NATO's Southern Flank in the East-West Balance," *Lo Spettatore Internazionale*, January-March 1979, pp. 13-23.

4. *The Military Balance, 1979-1980* (London: International Institute for Strategic Studies, 1979), p. 111.

5. *Ibid.*

6. "Instability and Change on NATO's Southern Flank," *International Security*, Winter 1978, p. 151.

7. *Ibid.*

8. *New York Times*, May 23, 1978; *Chicago Sun-Times*, April 5, 1979.

9. Negotiations between the United States and Turkey are now taking place on a revised Defense Cooperation Agreement. See *Foreign Broadcast Information Service*, October 17, 1979, p. T-1.

10. If we extend the definition of the southern flank to include France and Italy, the generalization still holds. The French are con-

cerned about the influx of weapons into Algeria and Libya, but it is not perceived as a "clear and present danger." The Italians believe that the Soviet Union has received little advantage in the area after twenty years of attempted posturing.

11. Greece spearheaded the convocation of an inter-Balkan conference in Athens in January 1976.

12. *New York Times*, April 21, 1979.

13. In 1978, Foreign Minister George Rallis visited Moscow. This was a first for a Greek foreign minister. The major accords signed during the visit were a scientific and cultural cooperation agreement and a convention establishing a Soviet consulate in Thessaloniki and a Greek one in Odessa.

14. *New York Times*, November 4, 1979. Athens and Moscow have increased their contacts in the fields of energy, shipping, tourism, and sports.

15. This rapprochement began in December 1975, when Prime Minister Kosygin arrived in Ankara in the company of 40 Soviet financial and political experts.

16. Total Soviet aid to Turkey to date totals \$1.75 billion. This aid includes the expansion of the Iskenderum Steel complex and the Izmir refining complex. See *Foreign Assistance Legislation for Fiscal 1980-81 (Part 3)*, 96th U.S. Congress, First Session (Washington, D.C., U.S. Government Printing Office, 1979).

17. *New York Times*, September 13, 1979.

18. *International Security*, Winter 1978, p. 167.

19. Bulent Ecevit, "Turkey's Security Policies," *Survival*, September-October 1978, p. 204.

20. Cited in Alvin Z. Rubinstein, "The Soviet Union and the Eastern Mediterranean: 1968-1978," *Orbis*, Summer 1979, p. 308.

21. *Ibid.*, p. 311.

22. Greece will become a full member of the EEC on January 1, 1981.

23. *Foreign Broadcast Information Service*, September 26, 1979, p. S-4.

24. The Athens metropolitan area, which includes Piraeus, contains one-third of the 8.7 million inhabitants of Greece.

25. *Foreign Broadcast Information Service*, August 28, 1979, p. S-1.

26. *Ibid.*, p. S-2.

27. In the November 1977 election Constantine Karamanlis's New Democracy party retained 177 seats, losing 48 seats. PASOK increased its seats from 12 to 93.

28. Greek participation was limited to naval and air units and was made possible by the manipulation of the NATO command structure. Usually, exercises would have been directed out of NATO's headquarters in Izmir, Turkey. Instead, to lessen Greek sensitivity, they were directed from NATO AFSOUTH headquarters in Naples (Italy). This put the exercises under the command of an allied admiral rather than a Turkish one.

29. The actual terms of the negotiations have not been revealed. However, Greece is thought to be seeking a special status within the alliance in which its armed forces would come under NATO command only in case of major conflict. With this arrangement, a new allied headquarters under a Greek commander would be established in Larissa (central Greece) similar to the headquarters in Izmir. Each of the two headquarters would have a national commander and an American deputy commander. Structurally, they would be subordinate to NATO's headquarters in Naples (CINCOSOUTH). Part of this plan has already been implemented. At the end of June 1978, a Turkish general took over command of the allied headquarters at Izmir, which,

until then, had been under the control of a U.S. general.

30. *Foreign Broadcast Information Service*, September 26, 1979, p. S-4.

31. *New York Times*, April 12, 1978.

32. *New York Times*, November 4, 1979.

33. *Christian Science Monitor*, December 17, 1978; *Wall Street Journal*, April 24, 1979.

34. *Foreign Broadcast Information Service*, October 23, 1979, p. T-2.

35. Dankwart A. Rustow, "Turkey's Travails," *Foreign Affairs*, Fall 1979, p. 90.

36. On the right is the National Salvation party, which tries to keep alive religious issues but also embraces economic development and intransigence on the Cyprus issue. At the extreme right is the National Action party, which advocates Pan-Arabism and an uncompromising hostility to communism. On the extreme left is the Turkish Labor party, a Marxist group oriented toward Moscow. Other groups exist that are oriented to Peking and Tirana, plus a variety of terrorist groups aligned with the PLO.

37. For detailed election results see *Foreign Broadcast Information Service*, October 22, 1979, p. T-2; November 8, 1979, p. T-1.

38. Presently, Turkey occupies some 35 percent of the island.

39. The International Monetary Fund in May 1978 consummated an agreement with Turkey for a \$450 million loan. The second installment was held up over disagreements over devaluating the Turkish lira, wage freezes, deficit budgets, and slashing of government expenditures. Also, in January 1979, President Carter and Chancellor Helmut Schmidt agreed on an aid package totaling some 380 million deutsche marks. The OECD in an agreement with a consortium of 12 nations is also putting together a major aid package for Turkey.

40. *Foreign Broadcast Information Service*, October 19, 1979, p. T-1.

41. There are four major intelligence bases: Diyarbakir, Sinop, Karamürsel, and Belbosi. *Christian Science Monitor*, May 1, 1979. The United States has scrapped the idea of using U-2 reconnaissance planes to monitor Soviet compliance of the SALT agreement.

42. Michael M. Boll, "Turkey between East and West: The Regional Alternatives," *The World Today*, September 1979, p. 36.

43. Economic and cultural ties have been consummated with the Soviet Union, Bulgaria, Romania, Libya, Kuwait, Saudi Arabia, and Syria.

44. *Washington Post*, March 2, 1978.

45. *Washington Post*, December 7, 1978.

46. Rubinstein, p. 309.

47. *Ibid.*, p. 310.

48. *Ibid.*, p. 311.

49. "The Strategy of the Unspeakable," *New York Times*, April 9, 1978, Section 4. Emphasis added. If the recently published volume, *The Third World War: August 1985*, by General Sir John Hackett and colleagues, reflects any part of reality, then it is readily apparent that NATO's southern flank is short-shrifted in most vital planning and strategic scenarios.

50. *Christian Science Monitor*, March 20, 1979.

51. Since the Soviet expulsion from Egypt, the Soviet military has lacked air bases, and its use of Syrian ports is less than adequate for major naval operations. Access to Yugoslavian ports is subject to regulations that apply to all foreign navies. There are possibilities along the North African littoral, notably Libya.

52. For a detailed discussion, see F. Stephen Larrabee, "Balkan Security," *Adelphi Papers*, Number 130 (London: International Institute for Strategic Studies), Summer 1977.

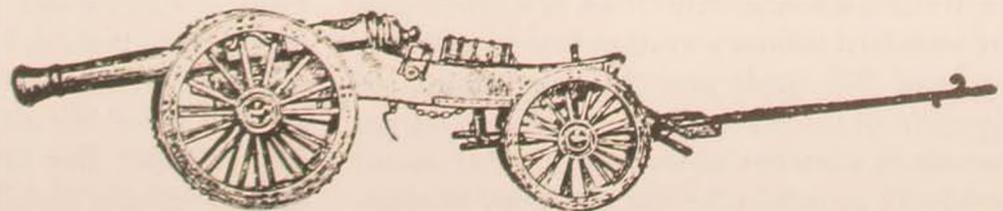


CLAUSEWITZ'S BICENTENNIAL BIRTHDAY

DR. PETER PARET

JUNE 1, 1980, marks the 200th return of Clausewitz's birthday. The date might serve to remind us not only of Clausewitz but also of the continuing significance that his time holds for us. The men born in the middle and the third quarter of the eighteenth century experienced and shaped the early Federal period in the new United States and the French Revolution and the Napoleonic era in Europe. A remarkable number of them were active in public affairs and at the same time studied and interpreted major forces of their age with a precision that is still convincing and relevant today. Together with hundreds of lesser men, such figures as Hamilton, Jefferson, Chateaubriand, Goethe, and the Humboldt brothers combined the active and the contemplative life. It is one of the more telling facts of our own day that the coexistence of these very different aptitudes in the same individual has become very rare, almost impossible.

Clausewitz was both a soldier and an intellectual. His military career was more varied and successful than is often thought. For many years the Clausewitz literature was dominated by the legend of the disappointed soldier, whose abilities were insufficiently appreciated and who died in obscurity. In a large, hierarchical



organization such as the Prussian army, anyone as independent-minded and uncompromising as Clausewitz would have encountered difficulties and made enemies. But his distinguished combat record as a junior officer was recognized, and he was given increasingly important administrative and staff appointments. At the age of thirty-eight, he became one of the youngest major-generals in Prussia, and in the last year of his life, he received a highly prized assignment, chief of staff of the forces mobilized during the international crisis triggered by the revolutions of 1830 and the Polish uprising against Russia. He could look forward to imminent promotion when he died unexpectedly at the age of fifty-one.

Throughout his active and often adventurous career, which ranged from commanding small units in battle to negotiating strategic and political issues of major significance with foreign powers, he studied and wrote. *On War* is merely the outstanding work among a vast number of theoretical, historical, and political writings, even the earliest of which are marked by unusual powers of observation and the courage to develop unorthodox arguments. To the student of European history from the French Revolution to the Polish uprising, Clausewitz is an important and appealing figure. His writings are filled not only with information but with comments and speculations that can guide our research in many areas of military thought and policy of the time. His mind as much as his life opens a window to a period that still presents many mysteries to historical understanding.

But what is his appeal to today's military professional? What can the modern officer learn from a soldier who lived at a time when the standard infantry musket had an effective range of 300 yards and the most rapid application of force consisted of cavalry charges over short stretches of level ground? It would be wrong to minimize the obstacles to com-

prehension and relevance that are posed by the enormous differences between Clausewitz's time and our own. The usual answer to this objection is to stress the timeless elements of war. When reading *On War*, the modern professional is often advised to discard the antiquarian features of the work and concentrate on those ideas that have permanent validity. That, however, is neither as easy as it sounds nor would such a selective approach accord with Clausewitz's rejection of such isolated truths as the "principles of war." On the contrary, he insisted on the close interaction between the smallest detail of tactics or supply and the universal characteristics of war. Any reader who opens *On War* with the expectation of easily separating the valuable kernels of pure gold from the chaff of antiquarian detail will be frustrated. He will fare better if he does not skip over the numerous references to eighteenth-century and Napoleonic warfare but instead lets his imagination be stimulated to seek modern parallels to the conditions and events of two centuries ago from which Clausewitz developed his theories. Not everyone is prepared to make such an effort.

Those who are, however, may find the experience rewarding. Today's military professional and Clausewitz share a common concern—the wish to understand war and to place it accurately in its political and historical, social and economic context. If the required effort is made, the shared concern will transcend the differences of generations.

Readers of *On War* may find it helpful to keep a few items of Clausewitz's intellectual development in mind. By the time he was in his early twenties, having already fought several campaigns against revolutionary France, Clausewitz had become convinced that dogma does not penetrate to the core of two linked issues: What is war, and how can wars be won? He certainly accepted the need for doctrine. But he believed that doctrine should remain flexible, adaptable, and sub-

ject to constant critical evaluation, instead of serving as a replacement of reality that made the work of thinking on one's own unnecessary.

As a young man he was also struck by the differences between the tradition in which he had been brought up—that of Frederick the Great's Prussia—and the military concepts and policies of Revolutionary and Napoleonic France. To us these differences seem obvious, but at the time few people anywhere recognized them clearly. After all, the traditional and the modern were still intermixed, and the French were only gradually, with many setbacks, evolving a new way of war. The difficulties of understanding were increased by the fact that both old and new military institutions were to a large extent based on such nonmilitary factors as the character of society, economic conditions, and the place and authority of the central executive. We can say without exaggeration that Clausewitz's recognition that one form of warfare was being succeeded by another lies at the center of his whole theoretical work.

It is remarkable that his comprehension of this development did not lead him to conclude that the old form was necessarily wrong or outdated. On the contrary, on the basis of the two very different kinds of war that he himself had experienced, he argued that a perfect form of war did not exist. Instead, the character of each war is determined by a nearly infinite variety of social, economic, technological, and psychological factors. Further, it is shaped by the political purpose involved, which can vary from persuading one's opponent not to pursue a certain policy to destroying him as a political entity. The "limited" wars of the eighteenth century were not fought with one hand tied behind one's back but were in accord with the social and political conditions of the time, just as the strategy of mass armies seeking the destruction of the enemy's forces suited the

limitless ambition of a Napoleon and the need of his opponents to defend themselves against him.

The practical implication that derives from what Clausewitz called "the diverse nature of war" is that a state must be organizationally as well as intellectually prepared to fight a variety of wars. That this is not a self-evident commonplace but an extremely difficult challenge will be recognized by anyone who surveys the shifts and omissions of American defense policy from 1945 to the crises of Iran and Afghanistan.

It may seem from what I have said that Clausewitz regarded war merely as the product of political, social, and other forces; but that is not the case. He was convinced of the uniqueness of war and never ceased to stress its specific characteristics and its peculiar, often unpredictable, dynamic. The problem for the analyst, he believed, was how to deal with a phenomenon that was at once connected to and dependent on every other aspect of human existence and yet was something set apart that could quickly develop its own unique conditions. It is his greatest achievement that by formulating a comprehensive hypothesis of the essential components of war, Clausewitz made it possible to subject war to a realistic as well as systematic analysis.

The dominant tendencies of a state's military policies and actions, he argued, are formed

- by the character and psychology of its society,
- by the abilities of the commanders and their forces, and
- by the concerns and purposes of the political leadership, acting in the current and historical context of the state and the international community.

These three tendencies are like three different codes of law, deep-rooted in their subject and yet *variable in their relationship to one another*. A theory that ignores any one of them or seeks to fix an ar-

bitrary relationship between them would conflict with reality to such an extent that for this reason alone it would be totally useless.

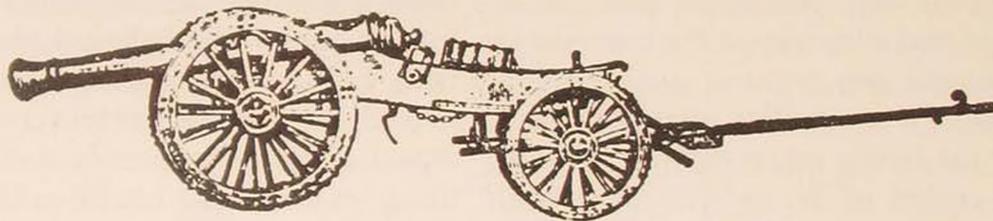
Our task therefore is to develop a theory that maintains a balance between these three tendencies, like an object suspended between three magnets.*

It is often said that Clausewitz is quoted but not read. If that was once true, it no longer seems to be so. Since the new English translation of *On War* appeared in 1976, it has sold well over 13,000 copies. In addition, a good new French translation was published some years ago, and in West Germany an ex-

cellent modern scholarly edition has been reprinted several times in the past twenty-five years. Today, *On War* is read more than are the works of many of the great early nineteenth-century thinkers who recognized the coming of the modern age and sought to interpret their time and its implications for the future. Despite the difficulties his writings pose—difficulties inevitably present in any original, closely argued work—Clausewitz has something important to offer us: not answers but intelligent help in thinking about one of the most crucial aspects of the human condition.

Stanford, California

*Carl von Clausewitz, *On War*, translated and edited by Michael Howard and Peter Paret (Princeton, N.J.: Princeton University Press, 1976), p. 89. Emphasis added.



ON WAR Today?

LIEUTENANT COLONEL JAMES L. COLE, JR.

CARL VON CLAUSEWITZ'S *On War* is often quoted, infrequently read, and rarely understood, and this fact alone constitutes sufficient justification for its serious study by professional soldiers. But *On War* should not be read as a source of information but rather as a medium for reflection. The content of *On War* is as dated as the man and his times, but his style of analysis provides the military

professional with a practical frame of reference that is of inestimable value and timeless in application. Carl von Clausewitz proposed an ordered and logical methodology for defining and analyzing the phenomenon of war, but he couched his analysis in terms of an intellectual quest that breaks the barriers of time and technology. Indeed, he wrote "to educate the mind, to suggest a way to study war."¹

Clausewitz applied inquisitive analysis to the phenomenon of the French Revolution which spawned the democratization of war and the nation in arms. The measured precision, limited means, and specific objectives of eighteenth-century warfare were violently supplanted by intense chauvinism, mass armies, and total war. Napoleon was the key instrument in this remarkable transformation, and Clausewitz witnessed and experienced the essence and impact of the phenomenon. We are the beneficiaries of his examination and inquiry, for as he answered his questions, he also provided future military professionals with the means to answer their own questions. Reading Clausewitz in his effort to distill the essence of war causes us to reflect, analyze, and educate ourselves with regard to the phenomenon of war and all its implications and ramifications.

"Knowledge must become capability."

Peacetime priorities and constrained budgets can easily obscure the primary function of the professional soldier. Study, training, and preparation must be oriented toward effective and successful performance in combat regardless of the level of position or command. The impact of technology on warfare and the nature of the international arena today dictate thorough preparation for immediate response in times of crisis. The popular "come as you are" label for modern warfare applies to the entire spectrum of conflict; and personnel, training, and equipment priorities must be structured accordingly. Today's "readiness" is Clausewitz's "capability," and failure and defeat are the penalties for deficiency.

"But war is nonetheless a serious means to a serious end."

The United States has been distinctly fortunate in its national experience, for we have

not suffered the trauma of a foreign invasion and defeat. Nor has our civilian population experienced the chaos, deprivation, and death resulting from combat operations within our own borders for more than a century. We have been profoundly conditioned by this past good fortune to the point of smug complacency. Neither soldier nor civilian can afford such complacency today.

A traditional trend in U.S. civil-military relations has accelerated to the point that there is a great disparity between those who formulate policy and develop strategy and those who serve as the executive agents. Military professionals have essentially abdicated the role of serious thinking and writing to the civilian strategists. Sensitivity and perception with regard to the implications of the use of force are sharpened considerably by experience in the arena of combat. Such sensitivity and perception preclude entering that arena lightly, for war is indeed much more than simply another policy option. It is one thing to philosophize and formulate in the abstract and quite another to fight in the brutal reality of war. By splitting the functions of serious thinking and writing apart from the tempering effect of combat experience, we are reminded of Sir William Butler's cryptic comments about "fighting done by fools and thinking done by cowards."

"Courage is the soldier's first requirement."

The observation regarding courage appears self-evident. Unfortunately, it is often ignored until needed most. The age of management, technology, and intellectual endeavor often directs our energy and attention in very different directions. A basic reordering of priorities is in order, for although the level of sophistication of war has changed, the very substance of the phenomenon has not.

"Courage is of two kinds: courage in the face of personal danger, and courage to accept responsibility."² History is replete with examples of both types in the profession of arms. Alexander the Great, Lord Nelson, Daniel Morgan, Andrew Jackson, Robert E. Lee, Ulysses S. Grant, and many others have demonstrated the crucial dimension of courage. More recently, Brigadier General Anthony McAuliffe at Bastogne and General Douglas MacArthur in Korea vividly demonstrated the full spectrum of courage of "two kinds." The past is prologue and the requirement constant. Courage of the highest order and strength of character are timeless requirements and unquestionable requisites for the profession of arms.

"War is the realm of physical exertion and suffering."

Projected on a more personal plane, sensitivity to physical exertion and suffering is reinforced by personal experience. The passage of time and advancement in rank can dim awareness and desensitize the commander. This was no doubt the case in the strategic and tactical debacle of the trench warfare stalemate during World War I. Such does not have to be the case, however, for we can recall General Mathew B. Ridgway's famous comment that ". . . for a battle commander ever to condone the unnecessary sacrifice of his men is inexcusable."³ The commander is responsible! A constant awareness and a permanent reminder must remain with the military professional as the time and distance from the arena of combat increase, and most assuredly as well with the political leader or civilian strategist who may never have been there.

"In tactics, as in strategy, superiority of numbers is the most common element in victory."

The impact of technology on warfare is an interesting theme that deserves serious atten-

tion. Technological implications transcend the field of battle, but the invention of gunpowder, the development of the machine gun, and the advent of the airplane were sequentially exploited beyond all reasonable expectations of combat effectiveness.

Victory in battle rewards those who anticipate changes in warfare through the medium of technology. Defeat awaits those who do not. The ever increasing rate of technological advance and innovation, however, has created a technological obsession at the expense of other fundamental considerations. The advent of the military technologist is well documented and really needs no further elaboration here.⁴ Civilian technological expertise has likewise become an institutionalized imperative due to the complexity of modern warfare. But perspectives and priorities are essential if one is to prevail in combat.

We cannot lose sight of the importance of numbers and force ratios as we seek to maximize the benefits of technological innovations. Numbers are important! The Messerschmitt Me 262 represented one of the most impressive "force multipliers" in the history of warfare, but that fact provided little comfort to the Luftwaffe as its early jet aircraft was overcome by the sheer numbers of Allied opposition during World War II. Allied numbers superseded German technology, and the net result was defeat. The example is still relevant and the lesson timeless.

"War is an instrument of policy."

The relationship between war and policy probably constitutes the most significant justification for the study of Clausewitz today. This relationship is time tested and as relevant now as it was when Clausewitz first described it. The history of the United States does not reflect a clear understanding of this relationship, and the fierce pursuit of total military victory even at the expense of politi-

cal considerations has practically become an ingrained trait of the American national character. In the words of one noted scholar: ". . . the United States usually possessed no national strategy for the employment of force or the threat of force to attain political ends, except as the nation used force in wartime openly and directly in pursuit of military victories as complete as was desired or possible."⁵ The advent of nuclear weapons as well as the frustrating experiences of Korea and Vietnam have aggravated this trait to the point of pain, and the political decision to tolerate "essential equivalence" or worse portends even greater pain and significant risk as well. Such a predicament can produce real confusion regarding the risk and utility of military action in soldiers and statesmen alike.

Soviet leaders no doubt acknowledge that the utility of force as an instrument of policy has decreased with the omnipresent threat of nuclear holocaust, but even fifteen years ago they clearly perceived that the political returns from exploiting the possession of significant military power were increasing dramatically.⁶ The shift in strategic balance that has occurred since the Cuban missile crisis should leave little doubt regarding their future inclinations. Our own national experience as well as the ideological motivations and significant military capability of

our potential opponents dictate that the American professional soldier carefully study and fully comprehend the intricate relationship between war and policy and all its international and domestic ramifications.

TO ANTICIPATE twentieth-century answers in nineteenth-century writing is nonsensical. Soldiers, statesmen, and scholars are sometimes inclined either to ignore Clausewitz entirely or seek answers that are not there. Either extreme is as dangerous as it is foolish. Clausewitz set out to analyze and explain the phenomenon of war as he perceived it. The result is not so important as his logical method of analysis. Clausewitz does not provide answers but rather the means to answers. Questions and issues relating to war and politics are challenging and promise no easy solutions. The alternative to study, effort, application, and successful resolution, however, is as fearful as failing to accept this challenge is unprofessional.

The message is clear: "Woe to the government, which, relying on half-hearted politics and a shackled military policy, meets a foe who, like the untamed elements, knows no law other than his own power!"⁷ Perhaps the cliché about doing your homework may yet come to mean something more than showing well at daily standup.

Highland, California

Notes

1. Lt. Col. A. S. Britt, "European Military Theory and Practice in the 18th and 19th Centuries," lecture presented at Air War College, Maxwell AFB, Alabama, 27 September 1978.

2. Carl von Clausewitz, *On War*, translated and edited by Michael Howard and Peter Paret (Princeton, New Jersey: Princeton University Press, 1976), p. 101.

3. General Mathew B. Ridgway, "Leadership," *Military Review*, Oc-

tober 1966, p. 45.

4. Morris Janowitz, *The Professional Soldier* (New York: Free Press of Glencoe, 1960), p. 21.

5. Russell F. Weigley, *The American Way of War* (Bloomington: Indiana University Press, 1973), p. xix.

6. Thomas W. Wolfe, *Soviet Strategy at the Crossroads* (Cambridge, Massachusetts: Harvard University Press, 1964), p. 23.

7. Clausewitz, p. 219.

CLAUSEWITZIAN LESSONS FOR MODERN STRATEGISTS

DR THOMAS H. ETZOLD

CARL VON CLAUSEWITZ believed, as Peter Paret has noted approvingly, that theory, whether of art or of war, should promote the understanding of history. For Clausewitz, personal experience and a deep understanding of history constituted the essential catalysts for the alchemy in which high intellect might be transmuted into good judgment. Such judgment, he thought, was a vital quality of military and professional leaders, and thus the desired result or product of education.¹ This view invites inquiry as to whether Clausewitz's own theoretical excursions meet his test, that is, assist in understanding history in ways that refine judgment in political-military matters. Does the theory of war as elaborated by Clausewitz help, for instance, to understand the wars of Napoleon and, if it does, in what ways? Does the Clausewitzian theory of war illuminate the history of warfare through the ages in a manner that proffers lessons to contemporary strategists and, if so, what might they be?

The answer to each of these questions is clearly yes. This answer derives from the implications, for both questions, of a single proposition, namely, that Clausewitz's explication of the nature and dynamics of war accounts for the problems, not to say the fate, of winners and losers in war—Napoleon at his zenith and Napoleon at his nadir. The validity of Clausewitzian observations in analyzing the difficulties of winners and

losers in war forms one of the most important reasons for the universal utility of Clausewitzian analysis in studying the history of war and thus for the contemporary significance of Clausewitzian theories and teachings.

This argument, one hastens to add, springs from no presumption that we, or perhaps anybody, could provide either conclusive arguments or inclusive answers to questions of such scope. Commentators on Clausewitz remark on the depth and breadth of his intellect, the immensity of his achievement. And it is the fate of such commentators to experience the humbling intellectual anguish flowing from the realization that one is in a sense overmatched, that it is virtually impossible to deal thoroughly in any brief compass with any of the more important elements of Clausewitzian theory and logic, save at the risk of oversimplification to the point of triviality. Yet Bernard Brodie's melancholy observation holds true: for students of war—whether the wars of the present and future or those of the past—there is no substitute. "Clausewitz's work stands out among those very few older books which have presented profound and original insights that have *not* been adequately absorbed in later literature."²

Clausewitz's teachings concerning the nature and dynamics of war may, perhaps, best be approached through recollection and elaboration of the most familiar of his words,

the dictum that “war is nothing but the continuation of policy with other means.”³ Once little understood, this observation now perhaps is too easily grasped. The efforts of contemporary commentators and war college faculties to impress scholars and soldiers with the simple logic of the Clausewitzian statement have, if anything, succeeded too well. That, even in political-military affairs and war, ends should dominate means, purposes govern operations, seem so true as to be self-evident, so unremarkable as to excuse even the eager student from further rumination. Brodie tells of a retired British officer of very high rank remarking that he had once tried reading Clausewitz but had got nothing out of it. “If he had encountered strange new ideas requiring some effort to comprehend them . . . he might well have made that effort and perhaps carried away a feeling of being suitably rewarded. Instead he encountered wisdom, and thought it was nothing new.”⁴ It is worth wondering whether current commentators and courses do more to convey a sense of the wisdom to be found in studying Clausewitz or a sense of the self-apparent.

For this very reason, Paret’s recent juxtaposition of Clausewitz’s writing on the theory of war with his treatment of the theory of war seems timely and instructive. In discussing the theory of art and by extension the interplay between theory and reality in general, Clausewitz affirmed the central significance of the ends-means relationship. Rules of theory, he wrote, “are not intended for individual cases, and action in the individual case can be determined only by [applying the concepts of] purpose and means.”⁵ But as Clausewitz noted repeatedly in his writings and especially in *On War*, this was easier said than done. “Everything in war is very simple, but the simplest thing is difficult . . . but the difficulty is not that erudition and great talent are needed . . . there is no great art to devising a good plan of

operations. The entire difficulty lies in this: *To remain faithful in action to the principles we have laid down for ourselves.*”⁶

Why such difficulties should intervene between plan and action Clausewitz explained with his well-known and indeed fundamental contribution to the theory of war, the concept of friction. In Clausewitz’s definition, friction encompassed the host of elements—chance, uncertainty, effort, weather, and other psychological and material factors—that always cause the experience of war to diverge from the expectation of it.⁷

The concept of friction, the centerpiece of Clausewitzian theory, also provides a key to extending ends-means considerations into useful conjunction with other important constituents of Clausewitzian theory. Several such components, in spite of their relative obscurity, hold great instructive value for historians and contemporary strategists seeking to understand war’s consequences for winners as well as losers, in past as well as future wars.

In treating ends and means in strategy and war, Clausewitz implied as a matter both of logic and psychology a certain proportionality between the scale of effort, cost, and risk a state would reasonably accept on one hand and the value of objectives in contention on the other. One important reason for the distinction Clausewitz drew between war for limited aims and war for unlimited aims related to this exact point. It was sensible to think that states warring for concession would show less inclination to approach the extremes of violence and to exert themselves to the point of exhaustion than would states warring for the overthrow or extirpation one of the other.⁸

In real war, however, and in large part because of the workings of friction, the tidy rationality of proportion between means and ends always breaks down. Moreover, both winners and losers in war, those whose fortunes rise and those whose fortunes decline,

suffer from this fact. For the contender who meets initial successes in war, the ease of attaining them and the relative advantages accruing from them encourage the expansion of war aims, the enlargement of expectations. Correspondingly, there is likely to be a willingness to scale up the level of effort from that originally envisioned. For the contender who meets with reverses early in war, there is the unpalatable choice between accepting an unsatisfactory outcome, which is tantamount to forsaking the political aims that led it to accept or initiate war in the first place, or increasing its exertions and accepting greater risks so as to vindicate earlier decisions for war and continue the pursuit of advantage in war. Usually, in this latter situation, there will also be an inclination to enlarge war aims so as to compensate ultimately for the costs of early setbacks and to offset or otherwise redeem the greater-than-expected costs, exertions, and sacrifices of the war.

For both winners and losers in war, the breakdown of the ends-means or policy-strategy relationship is a virtual certainty. What is more, that breakdown will probably lead in both cases to an enlargement of the scale of effort and ambition in war.

Here war's momentum sets in, the tendency of war toward the absolute. It is perhaps not sufficiently appreciated how much Clausewitz worried about war's terrible tendency toward uncontrollability. He warned not simply that war would tend to the extremes of violence, although he realized that to be true. In this most gloomy conclusion, he warned that war once begun becomes progressively less manageable, less controllable, less susceptible to direction.⁹

What goes wrong? War, in a Clausewitzian sense, causes a nearly universal problem: once it commences, battlefield successes and battlefield frustrations alike cause the aims of the contenders to seem inadequate, unattainable, or perhaps simply mistaken. As indicated, in these circum-

stances aims usually grow. The enlargement of aims forces an increased war effort; or the need for an increased effort, whether to avoid ruin or consolidate gains, causes a corresponding enlargement of aims. The means-ends relationship in either case becomes unstable; means and ends begin to act on each other in what one might describe as a reciprocating fashion, each causing the other to swell in a form of escalation all too familiar to Vietnam-era Americans. This reciprocating action with its built-in escalatory dynamic constitutes war's momentum, its tendency to approach the extremes of violence and to run out of control as the aims of contenders devolve into flux or even chaos.

It might seem that, when the aims of contenders in war become obscure or seem unattainable, whether because of successes or reverses, statesmen and generals should simply seek negotiated peace. But political leaders, and for that matter military leaders, can rarely if ever ignore sunk costs. They get neither tax credit nor political credit for their losses, nor can they usually defer the consequences of gain or loss to moments of greater advantage or lesser liability.

In the Clausewitzian formula that war tends toward the absolute, then, one finds a profound caution on the resort to violence for political purposes. Clausewitz means that wars tend to run out of control. Further, he suggests that this sobering dynamic worsens with the passage of time and with the intensity of violence in any given war. Finally, and of utmost importance, he teaches that war's controllability decreases as the scale of effort and objectives increases.¹⁰

Hence his qualitative distinction between war for concession, that is, limited aims, and war for overthrow, or unlimited aims. In Clausewitzian terms, war for unlimited aims carries a qualitatively distinct risk relating to the tendency of war to run out of control and approach the extremes of violence. Here lies

the significance of Paret's profound observation that the ethical postulates of Clausewitz's views on the workings of state power "in practical terms stood for limited aims in foreign affairs."¹¹

When war tends to the absolute, it reverses the Clausewitzian ideal. Instead of the controlling dominance of purpose, of objectives, there are (in modern Defense Department parlance) capabilities in search of missions; there is opportunism both political and military and, in war, operation for operation's sake. Strategy comes to dominate policy; means become ends. War begun as a continuation of policy ends by destroying the policies and leaders responsible for the war in the first place. There may seem to be a certain rough justice in this; there is an even more certain catastrophe.

TO RETURN to the questions posed at the outset in this essay, does the theory of war according to Clausewitz help in the understanding of the wars of Napoleon? Yes, for it recalls to the student of those great campaigns some sober truths too readily obscured or discarded in the collective haste to apotheosize genius. Even such a man as Napoleon must be considered the subject, not the master, of the forces moving through his times, not least those of the nature and dynamics of war. Men are usually victims of their times, rarely in command of their institutions and circumstances, never of their destinies. Napoleon's genius lay in his grasp of the techniques of war, the political weaknesses of his adversaries at home and abroad, and the potential of the military instruments and institutions created by the Republic. His failures were in large measure the result not merely of character defects—immodest ambition, egoism, and perhaps irrationality—but of the workings of war's dynamic on his situation as on that of his less brilliant contemporaries and foes.

From 1808 onward, Napoleon suffered repeatedly from disruptions of his calculations concerning the ratios of resources and efforts required to attain his purposes. His efforts to drive England to terms via a combination of economic warfare and continental military successes foundered again and again. The reciprocating instability of Napoleon's ends-means reckonings showed in examples as modest as his administrative modifications of the continental system, when he proved unable to suppress smuggling, and in examples as grand as the debilitating Peninsular War and the calamitous invasion of Russia. Indeed, fluctuations in focus and endeavor in Napoleon's latter years as emperor present such complexity that scholars still debate whether he really had any established goals and, if so, what they might have been.

To have no clear-cut objectives is, in the Clausewitzian view of war, undesirable to be sure. But it is unremarkable as well, for it is the most likely condition of nations and their leaders after many years of war. War tends to become unmanageable, to disrupt policy and force alteration of purpose, and thus to destroy all reasonable limits derived from the governance of ends over means: these things explain as much about the course and outcome of Napoleon's wars as any amount of political or psychological analysis.

Does Clausewitzian theory clarify aspects of the general history of war and so instruct contemporary strategists? Again, yes, for strategic planners consistently overestimate the power of men to shape their times and their problems. It is commonplace among military professionals to believe that proper planning will shield armies and nations from the potentially disastrous effects of war's dynamics or at least mitigate them in ways that bear on the likelihood of success or failure in war. Modern military management fosters the belief that, by some combination of probabilistic mathematics and innovative

personnel policies, planners and commanders can make war accord with plans, suppressing the effects of chance and uncertainty in the military sphere.

Clausewitz teaches, nevertheless, that wars do not go forward as planned, that friction and war's momentum will unavoidably come into play. Together these forces will ensure that the experiences of war for all those engaged will depart in significant measure from their expectations. In turn, this divergence of real war from war on paper will disturb the delicate relationship of effort to objectives, both for those doing relatively well and for those doing relatively less well. An understanding of Clausewitz's theory of war requires strategic planners to avoid, at all costs, the temptation to exaggerate the correlation between military effort and political results. The idea that the resort to violence can be in any sense surgical or precise is one of the most mistaken and dangerous propositions of our own times. For in Clausewitzian terms, war in practice is an extremely imprecise and erratic instrument of statecraft. Understood in this sense, Clausewitz's writing on war forms the most closely reasoned and sustained argument against the use of war for political purposes to be found in the entire literature on war and strategy.

In an overridingly important sense, war brings the same consequences to both winners and losers. Knowing the theory of war does not exempt one from the effects of friction or from war's tendency toward uncontrollability. Both winners and losers must

accept that the resort to war will set in motion forces that neither can control. War will bring to winners as well as losers results that are at once unintended, unexpected, and for the most part unwanted. In Correlli Barnett's eloquent words concerning World War I, "War is the great auditor of institutions."¹² He might have added that institutions and leaders more often fail than withstand war's severe tests.

Thus, the task of today's planners, generals, and statesmen, as of those in the past, is not to make war conform to plans but to make plans in conformance with war's certain nature and dynamics. These they must learn in the study of history. Together, the Clausewitzian theory of war and sustained historical study compose an intellectual regimen vital to the political and military leaders of our time. This demanding study reinforces the moral virtue of prudence, often said to be essential in statecraft and surely of equal significance in strategy. It may also contribute to a healthful lowering of expectations in politics and, more especially, in war. For generals and statesmen will always have to struggle to remember that they are more the servants of fate, the agents of fortune, than their captains and kings.

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Notes

1. Peter Paret, "The Genesis of *On War*," in *Carl von Clausewitz, On War*, edited and translated by Michael Howard and Peter Paret (Princeton, New Jersey: Princeton University Press, 1976), pp. 3-25, esp. pp. 8, 11, 12, 14, 15, 23. See also Clausewitz's own discussions on pp. 140-42, 146, 147, 156-76. (All page references, unless otherwise noted, are to the Howard-Paret edition of *On War*.)

2. "The Continuing Relevance of *On War*," in Howard and Paret, *Carl von Clausewitz, On War*, p. 50.

3. Clausewitz, *On War*, pp. 69, 86, 87, 605-10.

4. Howard and Paret, *Carl von Clausewitz, On War*, p. 45.

5. *Ibid.*, pp. 14, 15.

6. *On War*, p. 119; Paret, "The Genesis of *On War*," p. 17.

7. Paret, "The Genesis of *On War*," pp. 17, 18; *On War*, pp. 100-26.

8. Paret, "The Genesis of *On War*," p. 21; *On War*, pp. 91, 92, 579-610.

9. *On War*, pp. 75, 76, 77, 87, 88.

10. *Ibid.*, pp. 582-94, 603-10.

11. *Ibid.*, pp. 90-99, 585, 586; Paret, "Clausewitz and the Nineteenth Century," in Michael Howard, editor, *The Theory and Practice of War* (New York: Frederick A. Praeger, Inc., 1966), p. 38.

12. Correlli Barnett, *The Swordbearers: Supreme Command in the First World War* (New York: William Morrow and Company, 1964), p. xvi.

TWO DIFFERENT WORLDS?

*the military historian
and the U.S. Air Force*



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THE relationship between military men and military history has traditionally been conditioned by the episodic nature of the warrior's work. Intense, relatively brief periods of action give way to long periods of time that can be used to prepare for the future. This process in turn frequently involves contemplation of the past. The common criticism of armies and navies as always being prepared for the last war, or the last war but one, overlooks the impossibility of creating a military equivalent of accurate laboratory conditions. Maneuvers can never be a complete substitute for combat, if for no other reason than the process is in-house, pitting parts of a system against each other. Justifiably high reputations as peacetime commanders often do not survive the entirely different demands of battle. Nor are successful combat leaders always the best choice for the peacetime tasks of training and evaluation. Even the most detached professional would hardly consider a "forever war" an ideal situation. From the days of Athens and Sparta it has therefore seemed natural for soldiers to seek counsel with the captains of antiquity—to use, in other words, history as part of the military laboratory.¹

These generalizations, however, are at best of limited applicability to the attitude of air forces toward military history and military historians. Three factors have combined to make air forces in general and the U. S. Air Force in particular institutionally less interested than the senior services in studying the past. First, air forces have from their beginnings attracted mavericks. If they were graduates of existing military academies, they tended to be men willing to break with established structures, men suspicious of orthodox wisdoms. During two world wars the massive expansion of air arms brought in large numbers of civilians whose value systems tended to resemble those of the professionals, at least in their interest in the new. Nor did the circumstances of aerial

warfare encourage profound reflection on the campaigns of Caesar or Napoleon. Whether in the wire-and-strut era or the age of thousand-plane raids, even relatively senior officers were likely to lead from the front—a fact substantiated by casualty rates and prisoner of war (POW) statistics. Popular culture and interservice rivalries alike combined to reinforce the image of the air force officer as a hard charger, a Flip Corkin or Terry Lee who led men by a combination of force of character and technical skills. Particularly in those air forces like the United States Army Air Forces (USAAF), which regarded commissioned rank as a prerequisite for many flying assignments, wartime promotions were rapid. And if the boy colonels of World War II dropped sharply in rank after 1945, their mind-sets did not necessarily change in ways more congenial to the study of history.²

This does not imply that air forces are blindly anti-intellectual, wedded in spirit to leather flying helmets and fifty-mission crush caps. Their mental energy, however, has necessarily been diverted into other channels. The sky, even more than the sea, is terribly unforgiving of slight mistakes. And this fact has led inevitably to a second reason for disinterest in history. It begins with an emphasis on engineering skills, broadly defined, as vitally important to a properly trained air force officer. The rivalries between line officers and technicians, characteristic of so many nineteenth-century navies, had little chance to survive in air forces under the conditions of World War I. The pilot who understood the workings of his aircraft and its armament and who checked his own ammunition before a flight might increase his chances of survival only marginally; but given the already high odds he faced, every little bit helped. Through subsequent decades, material changes succeeded each other so rapidly that just keeping pace has required a constant focus on the nuts and bolts

of aerial war. For all the encouragement given to broadening curriculums at service academies, cadets at the U.S. Air Force Academy tend to be urged by a wide variety of unofficial means, ranging from career counseling, to rumor, to their own perceptions of the civilian world, and move beyond the core curriculum required of all cadets to majors in engineering, aeronautics, or physics rather than history or literature.³

Once commissioned, the junior air force officer is likely to develop an increasing involvement with the social and behavioral sciences. Modern armed forces, at least in the Western world, tend to be presented as occupations rather than callings. Limited work weeks, useful craft skills, twenty years, and a pension—these are the stocks in trade of most recruiting literature, whether written in English, French, or German. Officer corps are subject to similar influences. In the U.S. Air Force, the concept of the garrison state has arguably become inverted. Perceived patterns of convergence with civilian structures are strong, particularly in supporting and service organizations. Formations embodying traditional or heroic models are relatively small and tend to incorporate high personnel turnover.⁴ This pattern reflects something other than a simple decline in martial spirit. To function at all, the modern air wing requires a complex matrix of equipment that cannot be optimally maintained on modern equivalents of Henderson Field—the remote airstrip with very limited facilities. And this in turn tends to produce bases that offer relatively comfortable living environments.

The word “relatively,” of course, must be emphasized. The air crewman of the 1970s nevertheless usually approaches death decently, with a clean shave, a full stomach, and fresh underwear. Only a small proportion of men in air force uniforms, moreover, can reasonably be expected to engage the enemy directly. More than in any other service, the typical airman of any rank plays a

supporting role. This situation gives rise to an interesting paradox, perhaps best illustrated by the self-image of transport pilots and navigators relative to their colleagues who fly fighters and bombers. An excellent case can be made that in a world where U.S. military presence is increasingly unwelcome, airlift capacity and in-flight refueling will be of vital importance in America’s twenty-first-century defense profile. One would hardly be aware of this, however, while listening to the “trash haulers” wry self-deprecation of their role and probable career patterns relative to their more “successful” colleagues who fly “real” combat aircraft. As for the nonrated officer, the man without wings, he tends very early to accept as a fact that his career options are going to be limited. These beliefs are the stuff of officers’ club happy hours and cocktail party conversations. As such, they have the kind of mythic stature not to be demolished by analyses of promotion lists or pep talks from three-star generals, all of whom seem to be command pilots.

These circumstances contribute heavily within the U.S. Air Force to the downgrading of what Morris Janowitz calls the “heroic” style of leadership. They correspondingly encourage bureaucratic approaches to career planning.⁵ An officer who takes an advanced degree may be influenced more by the availability of courses than their subject matter; an M.A. of any kind can look good on one’s record. Given opportunity for choice and reflection, however, such an officer may seek an M.B.A. in order to administer his section of the machine more effectively. He may opt for an M.A. in psychology, hoping better to understand and motivate the civilianized technicians who will form the bulk of any squadron or wing he might command. His choices also may be influenced by thoughts of a second career after retirement as an O-5 or O-6. But to study history in general or military history in particular, as opposed to mining the past for examples of

courage or leadership, is to walk the outsider's path—to pursue a kind of hobby at best peripheral to one's professional life.

The relationships between historians and air forces have been rendered distant by still a third element: the obvious difficulties of applying lessons drawn from land- and sea-bound history to the fast-changing field of aerial warfare. Until very recently, its tactical and operational principles have tended to be developed on an ad hoc basis. The issue of the immutability of strategic laws, an argument still raging among ground force theorists, has never had similar importance among air generals. Generalizations about the necessity of maintaining the offensive or achieving comprehensive air superiority still begin textbooks and lectures at the Air Force Academy. They lack, however, quite the sense of holy writ applied to their equivalents at West Point or Annapolis. Air power has never found its Mahan. The closest it has come to such theorists, men like Douhet or de Seversky, Mitchell or Trenchard, have been proved false prophets by too many standards. Once outside the realm of the most abstract generalizations, air force operational principles depend heavily, though not exclusively, on material factors. The wing-strength combat box might have been effective against the Luftwaffe's day fighters but is suicidal against a modern, electronically coordinated gun, missile, and aircraft defense. While modern discussions of air-to-air combat constantly search history for precedents, the best they are likely to produce are such universal constants as the importance of aggressiveness and airmanship, flying skill and sensible caution.⁶ No one seriously suggests that the combat techniques of a Max Immelmann or an Oswald Boelcke can be applied directly by the crew of an F-4 or the pilot of an F-15. Examples can be multiplied; the principle remains the same. And the modern military historian is generally too unconcerned with operational

history and operational analysis to provide the Air Force with any kind of independently conceived scholarly framework for analysis.⁷ In such a context it is hardly remarkable that much aerospace history remains thinly disguised antiquarianism: unit histories and material descriptions interlaced with war stories of the "there I was at 40,000 feet" variety.

IN LIGHT of these factors, can any mutual relationship between the U.S. Air Force officer and the academic military historian be said to exist? Should not each go his own way, focusing on his own goals and aims? Our answer is an emphatic no. To substantiate the negative, it is worthwhile to begin by asking, for example, whether the relative indifference to history, as described earlier, has not contributed to the strong influence of moral questions and inter- and intraservice rivalries on discussions of strategic bombardment in the United States—a debate sometimes seeming to regard historical evidence as no more than a source of support for preconceptions.⁸ In the sphere of tactical aviation, lessons in air-ground cooperation demonstrated by the Germans in 1939 and 1940 were first learned by the Army Air Forces through the Royal Air Force (RAF) in 1943, relearned by the U.S. Air Force in Korea, and once again rediscovered in Vietnam. This pattern has some institutional rationale: advocacy of an independent air force has traditionally been justified by asserting the decisiveness of strategic bombardment, as opposed to the mere support of ground troops. It has also resulted in the kind of periodic rediscovery of the obvious more commonly associated with the seminar room or the faculty meeting.⁹ The tendency for students of the thermonuclear arms race to assume or assert that history began with Hiroshima has similarly distorted approaches and perspectives in a wide variety of ways. The cynical historian

has no difficulty calling to mind other alleged ultimate weapons—crossbows, hot-air balloons, and dynamite are only three examples—and wondering whether a slightly broader-gauged approach to the problems of nuclear warfare might be preferable to Dr. Strangelove and his MAD bombers.¹⁰

Were it to end here, this article could legitimately be described as a series of cheap shots, a slightly more sophisticated version of a men's room graffito, observed by the author, which read: "History repeats itself, itself, itself." It is true that the school of experience charges murderously high tuition. But it is also true that confidence remains one of the primary attributes of the warrior. The essence of command involves the knowledge that one is going to make errors costing lives, while retaining the intelligence to minimize these errors and the will to act despite them. This will in turn tends to generate an optimistic cast of mind loosely described as the "can-do" mentality—an attitude making it relatively easy to draw favorable or optimistic conclusions from military history. Sometimes the conclusions are right and sometimes wrong; sometimes they are neither. When the Italian proto-blitzkrieg collapsed at Guadalajara in 1937, Europe's general staffs sagely described the impending decline of the tank and the limited value of large mechanized formations. The Germans, on the other hand, began with the premise that Mussolini's army could not be expected to do anything very well. In the short run, they were true prophets. By 1942, on the other hand, the blitzkrieg's foes had learned enough to demonstrate the validity of earlier warnings on the vulnerability of unsupported tanks and the need for cooperation among all arms.¹¹ The Armed Forces of the United States went into Vietnam well aware of the problems and pitfalls the French had encountered a decade earlier. The Americans were simply and firmly convinced of their ability to avoid making the same mistakes.¹²

Since history can so easily be used to justify opposing arguments, any real intellectual relationship between air forces and historians must go beyond mere utilitarianism. To demonstrate this, it is necessary to examine exactly what the student of history does when he works at his craft. Two essential ingredients are involved. The first is *evidence*. While history is not simply one damn thing after another, neither is it a purely intellectual construction. The historian requires data with which to work. The second vital element in the craft of history is *interpretation*. Without an analytical dimension, history degenerates into chronicle, becoming a meaningless jumble of unrelated information. And the way in which the historian deals with evidence and interpretation is what makes him a worthwhile mentor to the air force officer.

Evidence is important because most students, military or otherwise, approach history as a field of study that supplies answers to questions. Historians may deplore this attitude as fostering unscholarly present-mindedness. In practice, however, they also recognize the importance of being able to answer questions by reconstructing at least an approximation of what actually happened. This, in turn, requires the historian to do four things with his available data. He begins by *collecting*, by assembling a wide variety of material that seems pertinent to his chosen theme. To the best of his humanity, he avoids tunnel vision, the structuring of his material to fit conclusions predrawn by either men or machines. This attitude is a useful, not to say a necessary, counterweight to two tendencies within the military. One is traditional. It is a kind of heroic vitalism, a reluctance of commanders at all levels to consider information contradicting their views on a subject or a course of action. The other, more contemporary, is an assumption that ultimate truth is expressed by statistics. The influence of the mania for quantification on military

planning and operations scarcely requires elaboration. From the flow charts and cost-effectiveness readings of the McNamara era to the carefully compiled body counts and pacification tables of Vietnam, experience suggests that numbers are good servants, bad masters, and often only marginally relevant to the course of events.

The historian's second responsibility to his evidence is its *ordering* in a way that is at least coherent enough to help others to suggest new questions or see the answers to old ones more quickly. If the historian has a single distinguishing professional characteristic, it is the ability to establish structure in a confusing jumble of events. History resembles a tapestry: the closer one approaches it, the more one risks losing his view of the whole. Here, too, the staff officer or commander, faced constantly with the responsibility for establishing priorities and for making sense of inputs of every kind from a wide variety of sources, has an easily discernible common bond with the scholar.

The third element of the historian's relationship to his evidence involves *developing* new lines of argument by carefully drawing inferences from available material through logic and imagination. It is this process, however uncongenial it may be to the cliometrician or the social scientist, that establishes history as an element of the humanities and separates the historian from the medieval chronicler and the modern reader of computer printouts. History is the most tentative of academic disciplines. Its favorite phrases are "Yes, but" and "Are you sure?" Historians collectively tend to be cautious, lacking the rectitude of certitude common in other academic disciplines. As recent discussions of cold war revisionism suggests, the historian who violates the principle of caution in presenting his evidence risks becoming something else—a propagandist, perhaps even a liar, but not a historian.¹³ The uses of this set of abilities to the air force

officer, who never knows what is on the other side of the hill and is seldom perfectly sure what is on his own side, are obvious. These are skills acquired only with practice. They are neither intuitive nor quantitative. And in a service that has consistently stressed the role of the boy wonder, the water walker, the man who makes his mark by doing things differently—the role of the reflective thinker needs more emphasis than it often receives in practice.

Finally and perhaps most important, the historian *questions* his evidence. He is Cartesian in his doubts of the reliability of the material he studies, of the motives generating its existence, and of the relationship of a given interview or document to the rest of the events they describe. Here once more his skill is a function of knowledge and experience—learning by practice what to question and how to question it. And in a military environment where the pressure to get with the program can be overwhelming, the ability to question without permanently alienating his intellectual adversaries can be vital for the officer and the air force alike. Perhaps he will not find any more favorable response than did Socrates when he informed the Athenians that his habit of asking awkward questions deserved no less than permanent support at public expense. But it is this kind of moral courage whose development can well be fostered by closer association with the historian.

The second broad area where air force officers can profit from association with historians involves the task of interpretation. Here the historian faces six responsibilities. First, he *recognizes* the interpretations of other scholars. This obvious but important process of ground-clearing is basic to any coherent analytical work, whether in a university library or on a Pentagon planning team. If properly done, it can avert many a reinvention of the wheel—a peril to which, as suggested earlier, air forces can be particularly prone.

A second closely related task involves questioning the *defensibility* of the interpretations thus collected. The working historian asks two questions. First, does a given interpretation fit the data known or available? To what extent might it be simply the product of a scholar trying to be too clever by half? Second, is the interpretation internally coherent? Do the premises and the conclusions have a recognizable relationship to each other? This task is becoming increasingly important in an era when technical jargon and bad grammar combine in the pages of the best professional journals to confuse the most conscientious readers. To the professionally conscientious air force officer, whose time for reflection is inevitably more limited than is the academic's, separating shadow from substance as quickly as possible can be vital. He needs all the help he can get.

A defensible interpretation is not necessarily valid. It has merely passed tests of evidence and logic. The historian moves into the heart of his relationship to interpretation only when he begins *analysis*. This process essentially involves combining one's own evidence with the work of other scholars, then fitting the two together to generate new substances and meanings. Here again the air force officer can profit from involvement with an intellectual process involving judgment, intuition, and common sense—three of the most significant elements in making command or planning decisions. None of them can be taught. If they are acquired at all, it is through apprenticeship and practice. And because his work is focused on people rather than data, the historian can provide opportunities for cultivating these qualities in areas often denied the scientist or the technician.

The fourth responsibility of the historian to interpretation is *revision*—above all, revision of his own work. He must begin immediately to examine his conclusions in new frames of reference, to ask new questions, to

incorporate evidence he inevitably overlooks—evidence some reviewer is sure to point out. This demand for flexibility has been the rock on which many an academic career has foundered. One can simply be too proud of one's ideas to change them—or, indeed, to submit them to the pitiless scrutiny of anonymous critics. Most history departments have at least one professor who spends his career working on a project that somehow never quite reaches the stage of final typing. Again, the relevance of this process to the air force officer involves attitudes as opposed to direct connections. Maintenance of the objective may be an accepted principle of war, but how many military memoirs, published or unpublished, are written to justify inflexibility, to prove the author was right all along even if he *did* finish his career commanding a supply depot in Provo, Utah? And, on the other hand, how many ideas never reach even the memorandum stage because someone of relatively junior rank fears putting a foot wrong, particularly in areas where he cannot produce statistics to back his argument?

The fifth task of the historian is to admit the *limits* of his interpretation. He must have an idea of what questions his research can legitimately answer and what questions it omits. Just as important is the ability to recognize where one interpretation ends and how to begin developing another one. Johnny One-Note is another familiar figure in history departments. He is an adherent of monocausal explanations of history, not because he is a convinced Marxist, Darwinian, or Christian, but because he once had a thought. Perhaps he even published a monograph. Since then he has remained convinced that his particular insight is the sole key to anything that happened within a century in either direction. Professional parochialism has also been a distinguishing, if not distinctive, characteristic of air forces. The multiengined bomber became a virtual

fetish object in certain circles between 1934 and 1945. And how many fighter pilots during the early days of World War II recoiled at the thought of defacing the clean lines of their aircraft with bomb racks or even drop tanks? Here, too, it is scarcely an exaggeration to suggest that a systematic connection with an academic discipline encouraging the transcending or discarding of one's own ideas can only benefit the air force officer, particularly at the beginning of his career.

The sixth duty of the analytical historian is the *application* of his interpretations. Only with this process does history become something more than an abstract exercise. The historian who uses his insights to sharpen his perceptions of himself and his world is beginning to comprehend the ultimate value of an academic discipline with few correct answers. And understanding the nature of the relationships among oneself, the past, and the present is particularly crucial for the military man who seeks to be more than a mercenary technician. An honest, careful attempt to comprehend the past on its own terms can help furnish perspective on the present. Far more important, the methods of

developing such comprehension through the use of the historian's tools and techniques can help the officer override the limits of science, whether social, physical, or behavioral.

THE study of history can help the air force officer, in particular, remember a fact that is in danger of being lost among slide rules and computer programs, performance data and flow charts. Warfare, like history itself, is ultimately an affair of human beings, which in turn makes it the province of chance, ambiguity, and intuition. Neither Clio nor Bellona yields herself to crude or casual suitors. Their seduction requires talents and sensitivities foreign to simple technicians' macho. But the goal in both cases is worth the effort. And just as the young buck can learn polish and technique from the elderly boulevardier, so the air force officer can profit, as a human being and as an officer, from a connection with the academic discipline of history.

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Notes

1. Useful discussions, generally critical, of this tendency include John K. Mahon, "Teaching and Research on Military History in the United States," *The Historian*, XXVII (1965), 170-84; Peter Karsten, "Demilitarizing Military History: Servants of Power or Agents of Understanding?" *Military Affairs*, XXXVI (1972), 88-91; Peter Paret, "The History of War," *Daedalus*, C (1971), 376-96; and Jay Luvaas, "Military History: An Academic Historian's Point of View," in *New Dimensions in Military History*, ed. Russell F. Weigley (San Rafael, California, 1975), pp. 19-36.

2. Autobiographies and biographies of air force generals are fruitful sources of support for the thesis of unconventionality. H. H. Arnold's *Global Mission* (New York, 1949) and Colonel Alfred F. Hurley's *Billy Mitchell: Crusader for Air Power* (New York, 1964) are only two of many examples. Martin Caidin and Edward Jablonski stand out among the popular writers whose works, fiction and nonfiction alike, reinforce the image. Actual personnel and training procedures during World War II are surveyed in Wesley Craven and J. L. Cate, *The Army Air Forces in World War II*, Vol. VI, *Men and Planes* (Chicago, 1955), pp. 427 passim.

3. The contrast between this conclusion and such articles as Lieutenant Colonel W. L. Anderson, "The Whole Man," *Air University*

Review, September-October 1972, pp. 60-65, and L. I. Radway, "Recent Trends at American Service Academies," in *Contributions to Military Sociology*, Vol. 1, *The Perceived Role of the Military*, M. R. Van Gils (Rotterdam, 1971), pp. 19-38, is based on nine years of personal observations and conversations with cadets and faculty from a wide variety of departments at the Air Force Academy.

4. Cf. Harold Lasswell, "The Garrison State," *American Journal of Sociology*, XLVI (1941), 455-68; with Morris Janowitz, *The Professional Soldier: A Social and Political Portrait* (Glencoe, Illinois, 1960); and Charles C. Moskos, "The Emergent Military: Civil, Traditional, or Plural," *Pacific Sociological Review*, XVI (1973), 258-80.

5. Cf. John Downey, *Management in the Armed Forces* (New York, 1977); K. Lang, "Military Technology and Expertise: Some Chinks in the Armor," in Van Gils, pp. 119-37; M. N. Zald and W. A. Simon, "Career Opportunities and Commitments among Officers," in Morris Janowitz, *The New Military* (New York, 1964), pp. 257-85; Charles C. Moskos, "From Institution to Occupation: Trends in Military Organization," *Armed Forces and Society*, IV (1977), 41-50; and the commentary by Colonel Franklin D. Margiotta in the Inter-University Seminar on Armed Forces and Society *Newsletter*, April 1978, pp. 7-9; and Moskos, "Compensation and the Military Institution," *Air Force Magazine*, April 1978, pp. 31-35.

6. An excellent example of this intellectual process involves comparing Captain Dave Smith, "One vs. One or More," *USAF Fighter Weapons Review*, Spring 1975, pp. 23-25, with Major Barry Watts, *A Comparison of "Team" and "Single-Ship" Approaches to Aerial Combat* (USAF Academy, Colorado, 1976).

7. See the general bibliographic survey by Martin Gordon, "American Military Studies," *American Studies International*, XV (1976), 3-16; and Dennis E. Showalter, "A Modest Plea for Drums and Trumpets," *Military Affairs*, XXXIX (1975), 71-73.

8. George H. Quester, *Deterrence before Hiroshima* (New York, 1966); and "The Impact of Strategic Air Warfare," *Armed Forces and Society*, IV (1978), 179-206; and Melden E. Smith, Jr., "The Strategic Bombing Debate: The Second World War and Vietnam," *Journal of Contemporary History*, XII (1977), 175-92, are particularly useful surveys of this issue. See also David MacIsaac, *Strategic Bombing in World War II: The Story of the United States Strategic Bombing Survey* (New York, 1976).

9. For general discussions of this theme, see Robert Frank Futrell, *Ideas, Concepts, Doctrine: A History of Basic Thinking in the United States Air Force*, Aerospace Studies Institute, Air University (1971), esp. pp. 74 ff. and 160 ff.; Perry M. Smith, *The Air Force Plans for Peace* (Baltimore, 1970), pp. 27 ff.; Thomas H. Greer, *The Development of Air Doctrine in the Army Air Arm 1917-1941*, USAF Historical Studies, No.

89 (1955); William D. White, *U.S. Tactical Air Power: Missions, Forces, and Costs* (Washington, D.C., 1974); and Colonel John P. Russell, "The Future For Tactical Airpower," Professional Study No. 4707, Air War College, Air University (1972). Major H. G. Nopsker, "Perceptions of Fighter Strikes: An Investigation into Army and Air Force Officers' Concepts of Close Air Support, Air Interdiction, and Tactical Air Control," M.A. thesis, U.S. Army Command and General Staff College (1976), is a useful discussion of the semantics of the issue.

10. For some indications that defense analysts are beginning to rediscover history, see the cross section of recent articles in Robert J. Pranger and Roger P. Labrie, editors, *Nuclear Strategy and National Security Points of View* (Washington, D.C., 1977). Colin S. Gray, *The Soviet-American Arms Race* (Westmead, England, 1976), is another work with a refreshing, commonsense approach to its subject.

11. See, for example, Heinz Guderian, *Achtung Panzer* (Stuttgart, 1937) and the brief discussion in Kenneth Macksey, *Tank Warfare* (New York, 1972), pp. 95 ff.

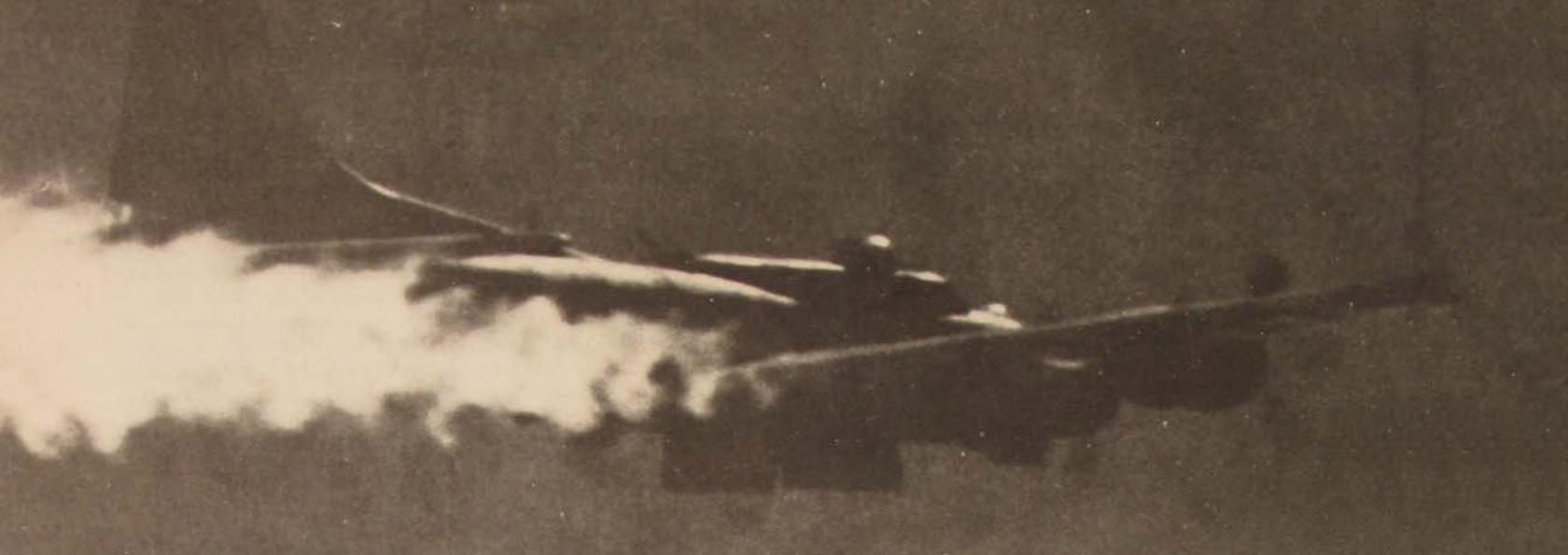
12. Zeb B. Bradford, "U.S. Tactics in Vietnam," *Military Review*, February 1972, pp. 63-76, is a particularly incisive analysis of this question.

13. The most scathing indictment of this approach to contemporary history remains Robert Maddox, *The New Left and the Origins of the Cold War* (Princeton, New Jersey, 1973).

The Army's Battle Reports

The U.S. Army Training and Doctrine Command at Fort Monroe, Virginia, publishes a series of TRADOC Bulletins called *Battle Reports*, which contain valuable, current information about threat weapons, equipment, and tactics, as well as methods for countering them. Information for these *Battle Reports* comes from simulations, field exercises, and intelligence sources and disseminates specifics concerning how to fight and how to support on the modern battlefield. Twelve issues of the series have been published to date, the most recent of which (August 1979) is titled "Combat Vehicle Engagements." Future issues will discuss Soviet airmobile capabilities, TOW gunnery and tactics, terrain reinforcement, electronic combat, Soviet chemical operations and countermeasures, Soviet river crossing operations, and other subjects of current interest.

Feedback from the field indicates exceptionally high enthusiasm for, and interest in, *Battle Reports* information. Yet, apparently, many units are unaware of or are failing to receive copies of *Battle Reports* as they are published; confusion also exists concerning how to order additional copies. Units should confirm that block 432 of DA Form 12-11B reflects the number of copies of TRADOC Bulletins (*Battle Reports*) desired for initial pinpoint distribution from USAAGPC, Baltimore. If block 432 is not completed, units will receive no initial distribution. These *Battle Reports* are intended to serve as interim guidance until the content can be integrated into appropriate "How To" manuals.



STRATEGY
PROCESS AND PRINCIPLES

back to the basics

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8718



CIVILIANS have adopted and adapted strategy. Businessmen, labor leaders, politicians, and economists all have strategies for success. Even lovers have strategies for seduction. Although originally a military term, common civilian use and misuse have clouded, confused, and complicated the military meaning of strategy. It is time to clarify the issue and get back to the basics.

In simplest terms, strategy is a plan of action that organizes efforts to achieve objectives. This simple definition, however, sheds little light on the factors that make strategy the most fundamental and most difficult of all military arts.

The difficulties stem from the subject's complexity. Strategy is a "two-actor" art form in which the strategist must consider both his plan and the opponent's reaction. At the same time, the strategist must contend with political, economic, and cultural influences that push and tug at his efforts to develop a plan of action. Finally, strategy is complex because all command levels have a role in formulating strategy, each level with its own perspectives and problems.

It is impossible to simplify strategy, but it can be better understood by considering strategy in terms of its ultimate purpose, which is to link ends and means. Strategy is the *process* which connects the objective ends with the means to achieve that objective. This discussion examines the strategy process, the critical nature of each step in the process, and the basic principles of strategy.

The Strategy Process

The strategy process consists of four fundamental steps that define the types of decisions the strategist must make. The steps range from the determination of national objectives and the grand strategy for achieving those objectives to military strategy and its resultant battlefield tactics. Each step forms one link in

the chain that must connect ends with means.

the role of national security objectives

Just as it is difficult to score a bull's-eye without a target, it is also difficult to devise a successful plan of action if one does not know the objective of the proposed action. In his often quoted definition of war, Clausewitz underlined the absolute necessity of connecting the political objective to the means of achievement.¹ The first task of the strategist is to assess the national security objectives that must form the foundation of the strategy process.

There is considerable evidence that U.S. difficulties in Vietnam originated in ill-defined, incorrect, or inconsistent national objectives. One sampling of flag rank officers in Vietnam shows that nearly 70 percent of these officers were unsure of U.S. objectives in Southeast Asia.² Was the objective to contain communism, counteract Soviet/Chinese influence, fulfill treaty obligations, expand U.S. influence, ensure the viability of South Vietnam as an independent nation, or seek retribution for attacks on U.S. forces in the Gulf of Tonkin? Was the only U.S. objective from 1968 on to withdraw from Vietnam while still retaining some degree of self-respect?

Allied objectives in World War II provide a stark contrast to the confusion in Southeast Asia. The Allied objective (regardless of its wisdom) of unconditional Axis surrender was clear-cut. Straightforward instructions to General Dwight Eisenhower to destroy the German armed forces after entering the Continent of Europe underlined the clarity of Allied objectives.³

Vietnam demonstrated a need for clear objectives, but it also emphasized a requirement for objectives that were truly national in nature. In a democratic society, the term "na-

tional objectives" assumes the support of at least a majority of concerned citizens. Although the opponents of U.S. involvement in Vietnam may have been only a vocal minority of the citizenry, the so-called "silent majority" apparently did not feel strongly enough about U.S. objectives (whatever they were) to voice its feelings to any great degree. The result was a decline in national will and morale, ultimately expressed in an almost audible sigh of relief as the Asian "crusade" came to an ignominious conclusion.

the formulation of grand strategy

After assessing and identifying national objectives, the strategist must determine the instrument or instruments of national power necessary to achieve the objectives. Grand strategy is the art and science of coordinating the development and use of those instruments to achieve national security objectives.

This definition of grand strategy includes both development and use of all national power instruments (economic, political, military, etc.) and the coordination of these instruments. In most cases, significant objectives can be achieved only by using instruments of power in combination; without coordination, the instruments can work at cross-purposes. Grand strategy must assign roles and missions, determine methods to make the assignments mutually supporting, and identify areas of potential conflict.

Sir Robert Thompson, who successfully directed the counterinsurgency campaign in Malaya, argues that the failure to coordinate the roles and missions of power instruments contributed significantly to the problems the United States encountered in Vietnam, at least during the period from 1964 to 1968. That is, civilian instruments of power engaged in pacification projects while the military "did its own thing" in the countryside chasing enemy main force units. Thompson contends that the military viewed

pacification as the "other war" when, in fact, it was the same war in a different costume. His successful experience in Malaya convinced Thompson that military and pacification campaigns must be closely coordinated and mutually supporting.⁴ One achieves little in building schools and digging wells in a village by day and in bombing and shelling the same village at night because of suspected enemy activity.

The task of developing a grand strategy appropriate for the objectives sought is critical for ultimate success, but it is difficult to accomplish because of the numerous competitors for roles, missions, and associated budget allocations. In addition to tasking competition among nonmilitary power instruments, grand strategy is the primary interface between these nonmilitary instruments and the military establishment. The grand strategy step is the focal point for arguments over the utility of force in international relations and the influence of the military in government policy.

the determination of military strategy

After selecting instruments of national power and assigning roles and missions, the strategist must focus on specialized strategies for each selected instrument. Of interest in this discussion is Military Strategy, the art and science of *coordinating the development, deployment, and employment* of military forces to achieve national security objectives. This definition includes four particularly significant terms. One should note that *development* and *deployment* do not necessarily denote wartime operations. The development and deployment of forces and an implied or expressed threat of their use can lead to the attainment of national objectives. The concept of nuclear deterrence, for example, is based solely on the threat to use developed and deployed forces. On the other hand, the definition also includes *employment*, a term

that refers explicitly to the ultimate use of forces during hostilities.

Coordinating is perhaps the most important word in the definition of military strategy. Earlier in this discussion, at the grand strategy step, coordination concerned relationships between power instruments. Coordination at the military strategy step refers to relationships *within* a power instrument. All too often in the past, the development and deployment of forces have been inappropriate for the eventual employment required. Prior to World War II, a series of static fortifications built along the German border, the Maginot Line, became not only the keystone of French defense but also a way of life. It was, in effect, a French Great Wall of China. The crushing expense of its construction and the complacency it fostered delayed modernization of the French army until it was far too late.⁵ As a consequence, on the eve of battle, the Allies had committed 36 divisions to these static defenses.⁶ Unfortunately for the French, highly mobile German units avoided the French fortifications, slashed deep into rear areas, and rendered the Maginot Line forces impotent.

The French failed to coordinate the development and deployment of their forces with the type of employment eventually required. The cause was their failure to recognize, in a timely manner, the revolution in mobility wrought by the internal combustion engine, particularly in aircraft and armored vehicles. This inability to analyze the impact of technology meant that the French could not foresee that maneuver rather than position would determine the course of future wars.

Fundamental to the military strategy step in the process is the development of an *appropriate* military strategy to achieve national objectives. An appropriate military strategy is not necessarily synonymous with battlefield victory. In Vietnam the U.S. military strategy of seeking the enemy in battle in order to apply overwhelming firepower resulted in victo-

ry after victory. Lasting success, unfortunately, required not that people be killed but rather that they be controlled.⁷ During the American Revolution, the Americans suffered many defeats and achieved few real victories. The end result, however, was independence from the British.

the role of battlefield strategy

In spite of clear national objectives, well-coordinated grand strategy, and appropriate military strategy, a nation can lose everything on the battlefield itself. The fourth basic step of the strategy process is to determine battlefield strategy, commonly known as tactics. Battlefield strategy is the art and science of battlefield employment to achieve national security objectives.

A traditional topic of discussion concerns the difference between tactics and higher levels of strategy. Even in the context of the strategy process, the classic differentiation still seems relevant in the sense that tactics govern the use of forces on the battlefield while grand strategy and military strategy bring forces to the battlefield. One can also state that tactics are concerned with doing the job right, and higher levels of strategy are concerned with doing the right job.

A particularly good example of the importance of proper tactics comes from World War II. The initial tactic for the daylight precision bombing of Germany involved the use of unescorted bombers. Unexpectedly high losses to German interceptors, particularly at Schweinfurt, caused suspension of this offensive until long-range escort fighters could be produced and deployed.⁸ The U.S. was fortunate that it had the time and means to correct this tactical error and reevaluate the doctrine that caused the error. But the fact remains that an incorrect tactic nearly defeated a vital role and mission based on clear objectives for which forces were properly trained, equipped, and deployed.

Tactics that achieve victory do not always result in achieving the objective. As was true in military strategy, tactics must be appropriate to achieve national objectives. In Vietnam, search and destroy operations were an important tactic within the overall U.S. military strategy of defeating the enemy by the application of superior firepower. Search and destroy operations were constantly victorious, sweeping through areas and driving out insurgents. However, U.S. forces would soon move on to new operations, and the Vietcong would quickly return. Vietnamese villagers were forced to seek accommodation with the Vietcong because allied troops could not guarantee their safety.⁹ Thus, a tactic resulting in battlefield success was inappropriate to achieve the overall objective.

Influences on the Strategy Process

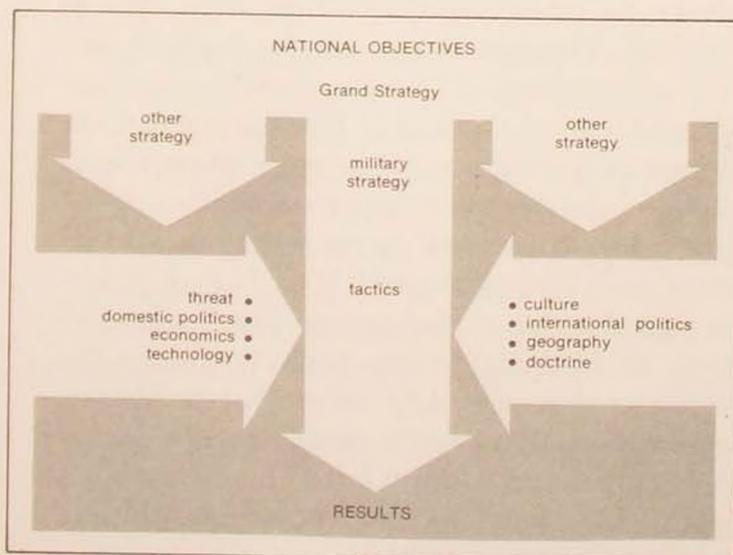
The preceding discussion outlined a theoretically straightforward process for linking political ends with battlefield means. In reality, however, at least three factors complicate the process. First, the seemingly neat and compartmentalized steps of the process are neither neat nor compartmentalized. They

tend to blend and flow from national objectives to tactics. Some writers have coined such intermediate terms as "grand tactics," "low-level strategy," and "high-level tactics" in attempts to describe certain situations precisely. Use of these exacting terms is unnecessary if one bears in mind that strategy is a process rather than a series of loosely related planning events.

There is also a reverse flow or feedback system within the process. Grand strategy, military strategy, and tactics change, at least in part, because of results obtained from the process. The reaction of the United States to losses suffered on the unescorted bombing missions over Germany is an excellent example of the effects of feedback on the strategy process. In that instance, the primary changes occurred in military strategy (new equipment and deployment) and tactics (escorting bomber sorties).

Finally, the straight-line flow from national objectives to battlefield tactics is constricted and twisted by numerous external factors that limit the strategist and his available options. A few of these factors are the nature of the threat, domestic politics, economics, technology, physical environment and geography, international politics, cultural heritage, and military doctrine.

The accompanying illustration graphically portrays the strategy process and the pushing and tugging of outside influences on the process, but it shows only a few of these influences. The impact of these constraining influences is situational. Their individual impacts are not necessarily uniform in scope or significance. For example, the impact of economics is very significant at the grand strategy step because budget allocations accompany the assignment of roles and missions. In the same manner, economic factors impact heavily on military strategy because of the costs involved in developing, deploying, and employing forces. The economic impact on tactics, however, is only indirect, derived



from the higher strategy levels.

The constraining external influences limit the options available at each step of the process. Economic factors, reflected in finite budgets, are the most obvious and constant constraints. However, other influences also eliminate the strategist's options. One U.S. option in Vietnam, for example, was to use nuclear weapons. International and domestic political considerations and, perhaps, cultural values effectively eliminated the possibility of nuclear employment.

One might argue that military doctrine plays a greater role than just limiting options. On certain occasions, doctrine has assumed more importance. The doctrine that strategic bombing could be decisive in warfare was transformed directly into an Army Air Corps strategy in World War II. On the other hand, the importance of military doctrine has often been overshadowed by other factors. In both Korea and Vietnam political factors prevented allied forces from attacking important enemy sanctuary areas, in direct violation of traditional military doctrine. Consequently, the most concrete thing that can be said about military doctrine is that it is another of the pushing and tugging influences that tend to limit options. The impact of doctrine and other constraining influences is situational.

It is interesting to note that if the illustration had fully displayed the strategy process for a different instrument of power, some of the words in the illustration would exchange places. If the illustration concerned the economic instrument rather than the military instrument, the vertical arrow would contain "economic strategy" in place of "military strategy," and the constraining influences pressing in on the process would include "military factors" rather than "economics."

Principles of Strategy

The development of strategy is a complex four-step process that organizes the basic task

of matching ends and means. A logical and orderly process, however, does not guarantee correct decisions. To improve the probability of success significantly, the strategist must use the process in conjunction with the three fundamental principles of strategy: the principle of linkage, the principle of the future, and the principle of reality.

the principle of linkage

The principle of linking ends and means is the essence of the entire strategy process. Full consideration of the overall political objective and each subordinate objective must be the driving factor in the process. This assumes that objectives are clearly defined, attainable, and acceptable. Each step of the process must be based on and support the previous step to form a direct linkage from national ends to tactical means. The discussion has repeatedly illustrated the principle of linkage.

the principle of the future

As stated earlier, strategy, in simplest terms, is a plan of action, and the purpose of planning is to prepare for the future. Thus, a second principle governing the development of strategy is that it must be oriented to the future.

Because the primary operating realm of the strategist must always be the future, the strategist must even subordinate today's immediate problems. The fact is that the size and effectiveness of today's forces were determined by yesterday's strategy decisions. If the strategist is required to respond to a contingency today, he can exercise only the options previously made available. Today's strategist is, in effect, a prisoner of the past and must be less concerned with success today and more concerned with success tomorrow.

The strategist must find a method to deal with the future's enormous risks and uncer-

ainties. He will seldom have reliable or precise information about either future circumstances or requirements. The strategist's most critical function is to open and maintain as many options as possible in order to deal with the most diverse situations.

The French experience between the two world wars again provides an excellent example of erroneously closing important options. As discussed earlier, the economic burden of constructing and maintaining the Maginot Line caused the French army to atrophy between 1918 and 1940. Selection of such a costly instrument of defense foreclosed the option of modernizing the army until it was far too late. In 1940 France found itself woefully deficient in self-propelled artillery, tanks with sufficient operating range, anti-tank weapons, and anti-aircraft weapons.¹⁰ In the language of economics, the "opportunity costs" of the Maginot Line were critically important.

Conversely, the military strategy of "flexible response," developed in the U.S. during the tenure of Defense Secretary Robert S. McNamara, was an attempt to open new options. The object was to reduce reliance on the "all or nothing" strategy of massive nuclear retaliation and create a military capability to respond appropriately to any provocation. One may argue the efficacy of flexible response, but the attempt to open new options was obvious and, in the eyes of many, successful.

The United States faces economic "opportunity cost" dilemmas today when making decisions concerning enormously expensive modern weapon systems. Certainly these sophisticated systems provide many options; however, their staggering cost may foreclose many other critically important options for the U.S., just as the cost of the Maginot Line did for the French.

One should note that orientation to the future does *not* imply that the strategist can ignore the past. History provides the founda-

tion, the lessons learned, on which the strategist can build a strategy framework for the future. The correct analysis of historical trends can, on occasion, provide clues to help clear away the clouds of uncertainty that obscure the strategist's view of future circumstances.

the principle of reality

The third principle of strategy is that all decisions in the strategic process must deal with the real world rather than illusions. Failure to deal with reality has led to severe consequences in the past. In 1938, Neville Chamberlain grasped at the illusion that Nazi ambitions could be appeased by handing over a small slice of Czechoslovakia; but Hitler's appetite for conquest was increased, not satiated. Rather than Chamberlain's illusion of "peace in our time," the failure of the English and French to recognize reality and stand firm emboldened the Nazis and eventually plunged the world into the abyss of total war.

The practice of ignoring reality is not limited to the past. Statements today such as "No More Vietnams" bear witness to the fact that many people choose to ignore harsh realities and opt for more familiar and comfortable circumstances. The U.S. obsession with preparations for a European conflict, almost to the exclusion of preparations for other contingencies, may be a symptom of the same reality recognition problem.

At least three "new realities" are major concerns for the strategist. The first is the shift in military power and recognition that the United States is no longer alone at the top of the international power structure. The Soviets have achieved parity in the nuclear arena, and SALT agreements will, at best, maintain some form of equivalence. The U.S. "big stick" of the 1950s and 1960s may now be an unusable tool in a nuclear stalemate. Below the nuclear level, the United

States is outnumbered, outgunned, and seriously challenged in military technology.

The second "new reality" is U.S. dependence on the rest of the world for essential resources. Today, the U.S. imports more than 50 percent of its requirements for 20 out of 30 mineral resources essential to its economy, and this figure does not include oil. The major suppliers of these resources are located primarily in Africa, Asia, and Latin America.¹¹

A third "new reality," driven home by the Vietnam conflict, is that the American people will not support a prolonged foreign war unless they perceive a direct threat to their self-interests. Both the Korean and Vietnamese conflicts confirmed this fact by contributing to the retirement of Presidents Harry Truman and Lyndon Johnson. Congressional attempts to limit presidential war powers are the latest manifestations of the antiforeign involvement syndrome.

THE MANIFOLD implications of the "new realities" lead to numerous questions of great significance to the strategist. Will the U.S./Soviet nuclear standoff encourage adventurism on the part of lesser powers creating chaos in the Third World? Will rising demand, dwindling supply, and unstable

sources of crucial raw materials draw U.S. attention and commitment away from NATO and toward the Third World? Will the antiforeign involvement syndrome continue, or will resource problems reawaken the American penchant to police the world? If the involvement in Third World affairs is required, will the military be prepared, and can public opinion be mobilized?

It is apparent that the United States (and thus the world) is changing from the comfortable and controllable post-World War II era to an uncertain and perhaps ominous future. The transitions from unrivaled power to (at best) equality, from abundance to scarcity, from confidence to uncertainty, and from definite purpose to confusion and dissent make it clear that a complete reappraisal of U.S. objectives, assumptions, and strategies is due, if not overdue.

The basics of the strategy process and the associated principles of strategy form a framework for a reappraisal and a basis to evaluate proposed alternatives. The process and the principles force the strategist to return to the fundamentals of strategy. In confused and chaotic times, the fundamental approach is often the most constructive.

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Maxwell AFB, Alabama*

Notes

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2. Douglas Kinnard, *The War Managers* (Hanover, New Hampshire: University Press of New England, 1977), pp. 15-33.

3. Dwight D. Eisenhower, *Crusade in Europe* (Garden City, New York: Doubleday, 1948), p. 225.

4. Robert Thompson, *No Exit from Vietnam* (New York: David McKay, 1969), pp. 145-62.

5. Alistair Horne, *To Lose a Battle, France 1940* (Boston: Little, Brown, 1969), pp. 26-31.

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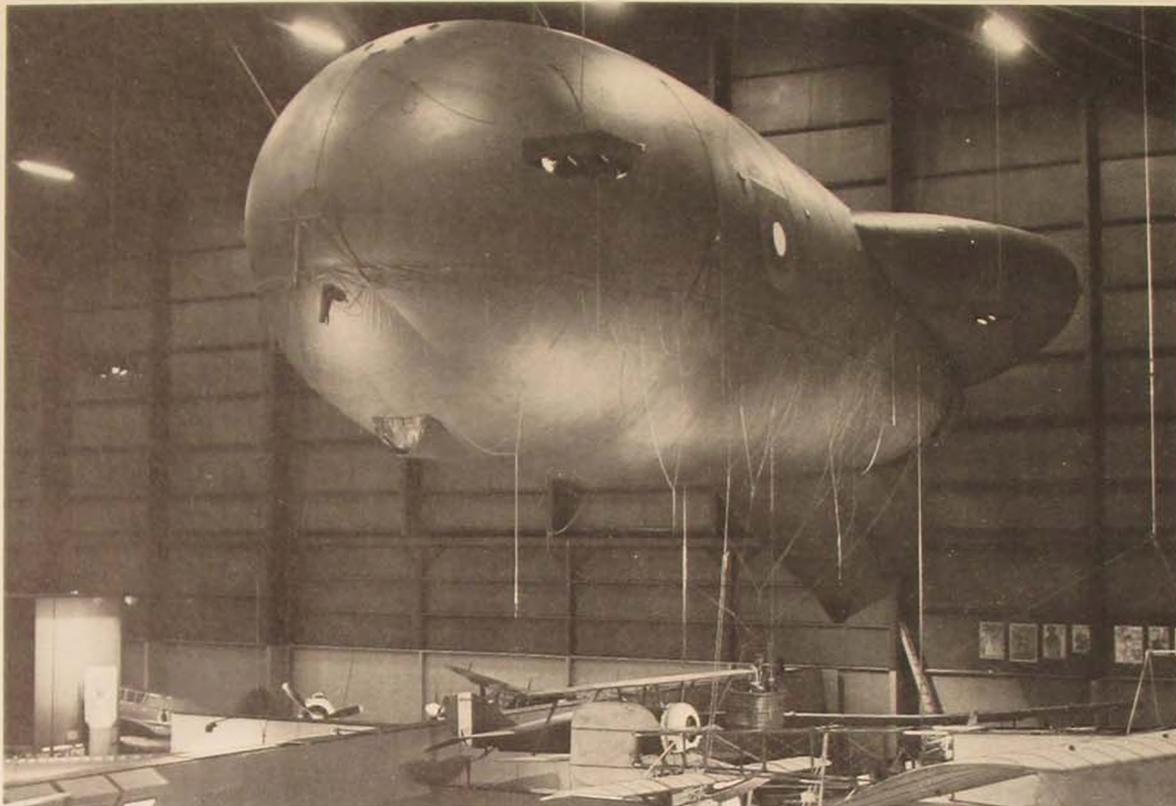
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9. Guenter Lewy, *America in Vietnam* (New York: Oxford University Press, 1978), p. 70.

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11. David J. Kroft, "The Geopolitics of Non-Energy Minerals," *Air Force Magazine*, June 1979, p. 77.



The Caquot Flies Again

PATRICIA TURNER SCHRIVER

Please take me down
All the way to the ground.
The wind whistles by
With a hell of a roar.
I don't want to stay up
In the basket no more!
Oh my, I'm too young to die,
Please take me down!

THOUGH he was mostly joking, the World War I balloon observer had sufficient cause to sing this theme song. Aside from the hazards of his balloon tethered in the air by a single 5/8-inch steel cable at 4000 feet altitude—a rubberized cotton bag filled with 32,200 cubic feet of highly flammable hydrogen directly over his head—the observer had many other things to worry him. He knew his great flabby gas bag was such an important target that balloon kills were rated as 1½ airplane kills to enemy aviators. The balloon was also a favorite objective of German artillery; when the airborne observer saw a muzzle flash on a distant hillside, he had several seconds to wonder about the gunner's accuracy. If his balloon was hit by gunfire or shelling, only 15-20 seconds would elapse before it might begin to burn fiercely. In this brief time, the observer had to check his parachute harness attachment and jump over the side of the basket without becoming entangled in the balloon's numerous ropes and cords. Even once bailed out, he was not necessarily safe, as it was possible that pieces of the burning balloon might ignite his parachute.



The only surviving Caquot observation balloon (facing page) flies once more, appropriately over the World War I exhibit of the U.S. Air Force Museum at Wright-Patterson AFB, Dayton, Ohio. . . . An observer and a maneuvering officer of the 2d Balloon Company prepare for ascent in the balloon basket to observe German positions on 8 July 1918. The wicker pocket holds maps and charts, and an observer's parachute hangs from the side of the basket.



A fully inflated Caquot balloon (above) with one passenger aboard floats on the air above its handling crew and winch trucks. . . . The winch truck (right) used by U.S. forces during World War I could lower a balloon as fast as 1600 feet per minute. It could also tow an inflated balloon at a speed of five miles per hour, even faster in an emergency.



These risks seemed justified on the basis of the balloon's unequalled ability to "see" behind the enemy's front line. During World War I, aerial photoreconnaissance was in its infancy, and observation by heavier-than-air planes was both inaccurate and awkward due to the lack of suitable air-ground communication other than prearranged signals or dropped messages. From a stationary balloon, the observer could see as far as ten miles, note changes behind enemy lines over a period of hours or days, and be in constant telephone contact with the ground for directing artillery fire or transmitting intelligence information.

MANY American World War I balloon observers never fully appreciated the vast improvement of their Caquot (Cah-kōh) balloons over earlier observation balloons' designs. The first captive balloons were spherical and tended to revolve slowly around their tethering lines. Later balloons were roughly cylindrical with rounded ends; a long, tube-shaped lobe was attached to the underside, curving up around the end of the balloon. This lobe, which acted like a rudder, was open-ended and not filled with gas. It hung limply when the air was calm but filled with wind and helped stabilize the balloon when it was breezy. Umbrella-shaped "tailcups," strung on a line from the rear of the balloon like a kite's tail, helped prevent the balloon from swinging back and forth. This kite-like type of balloon, known as the drachen, had been developed in Germany, but it was being tested by both France and Great Britain when World War I began. It proved to be relatively unstable in

high winds and was virtually uncontrollable if the tailcups tore loose during a storm.

While trying to improve the drachen, Captain Albert Caquot of the French army developed the first streamlined captive balloon early in World War I. The major design changes in addition to the streamlining, which decreased air resistance, were the relocation of the inner air chamber (balloonette) from the rear to the nose of the balloon near the underside and three air-filled lobes spaced evenly around the tail. The balloonette was separate from the main gas envelope and filled through an exterior air scoop; it helped keep the outer envelope taut when the volume of hydrogen fluctuated because of differences in atmospheric pressure, temperature, and seepage through the rubberized fabric. The new location of the balloonette resulted in greater stability, lessened tension on the cable, and permitted the balloon to ride nearly horizontally above its mooring, regardless of the winds. With these improvements, the Allies had found a practical captive airborne observation platform, which operated successfully in winds as high as 70 miles per hour.

The Caquot balloon had a capacity of 32,200 cubic feet of hydrogen gas, giving it sufficient lifting power for the mooring cable, basket, two passengers, and necessary equipment. In good weather, the balloon could ascend to more than 4000 feet altitude with operations normally conducted at between 1000 and 4000 feet. Although fire was a constant danger, the highly flammable hydrogen was essential: there was no quantity process for manufacturing helium at that time. By Armistice Day, however, American engineers had developed a process for extracting helium from liquefied gas and had readied 147,000 cubic feet of the nonflammable gas for shipment to the front.

When the United States entered World War I in April 1917, an observation balloon school was rather hastily established at Fort Omaha, Nebraska. Training encompassed far more than handling the balloon. Since his main purpose was regulating artillery fire, the observer had to be familiar with artillery operations, signals, maps, and instruments. He was in direct telephone communication with all batteries in the sector, often handling as many as three divisions, corps artillery, and G-2 (intelligence). From his vantage point, the observer could report enemy activity, troop concentrations, and the location of food and ammunition dumps and could direct artillery fire precisely onto these targets.

The use of parachutes was essential. Even though the powerful truck-mounted gasoline winch could reel the balloon to earth in a few minutes, the safest course for the observers when the balloon was attacked was "over the side." The parachutes most commonly used were mounted outside the basket in inverted cones and attached to the observers by ropes. Later in the war, a "basket parachute" was developed and tested that separated the entire basket from the balloon and floated it to the ground, thus saving the maps, charts, instruments, and telephone equipment. Although this type of parachute was tested at the front, Americans relied on the one-man chutes for operations.

Enlisted men learned how to make balloon "beds"; to inflate, handle, and maintain the balloon; to maneuver the balloon in air; and to move the balloon to another area while inflated.

General John J. Pershing, Commander of the American Expeditionary Forces, had requested that 125 balloon companies be shipped overseas as soon as possible, but the first American balloon unit did not reach France until 28 December 1917. On arriving, the group was separated into four companies and assigned to either an artillery training center or a balloon school. Here they were taught French balloon procedures and equipped with French Caquot balloons, parachutes, winches, and other equipment, as American equipment was not yet available.

The 2d Balloon Company relieved a French balloon unit on 26 February 1918 at L'Ermitage Woods and began operations with the American First Division. Thus it became the first complete American Air Service unit in history to operate against an enemy on foreign soil. This was the first of 17 American balloon companies to see active service; six more arrived at the front shortly after the armistice.¹

The first American balloon destroyed by the enemy belonged to the 4th Balloon Company, operating in the Toul sector. After building their camp in late May 1918, members of the 4th put up their first balloon, only to discover that the Germans had also put up a balloon

across the front directly opposite the Americans' position. "Every day thereafter a game of hide-and-seek or peek-a-boo ensued, with the two balloons going up and down like yo-yos on a string while the opposing observers [presumably] thumbed their noses at each other." The Americans went into gales of laughter during each of these routines and nicknamed the two balloons "Fatty" (American) and "Stinky" (German). These antics continued for several days but on 16 June, the day the Germans attacked Xivray, they moved Stinky and began firing shrapnel at Fatty and heavy explosive shells at its winch. After an hour's heavy shelling, members of the 4th finally pulled Fatty down to the balloon bed. Within a few minutes, a shell landed nearby, destroying the balloon.²

Only 12 U.S. balloons were lost to enemy shellfire, while 35 were destroyed by attacking aircraft. The average life of a balloon on an active sector of the Western Front was 15 days. However, only one observer was killed by enemy action: Lieutenant Cleo J. Ross, of the 8th Balloon Company, on 26 September 1918. When their balloon was attacked at close range by a German Fokker D.VII, both observers bailed out, but Lieutenant Ross jumped too late. Pieces of the burning balloon ignited his parachute, and he fell to the ground from 4000 feet. Ross was posthumously awarded the Distinguished Service Cross. In all, American observers made 125 combat jumps, 61 from burning balloons and 64 from balloons that did not burn. Numerous observers made multiple jumps during their service at the front, and eight bailed out twice in one day.

However dramatic, these facts tell little about a balloon company's day-to-day operations. The company normally consisted of six officers and 170 enlisted men. Usually four of the officers served both as observers and section heads; the other two were the commanding officer and his adjutant, who was also the maneuvering officer. The enlisted men's duties included rigging, handling, and maneuvering the balloon; working in the chart room and mess tent; guarding against poison gas attack; driving the company trucks; and operating the winch, telephone system, and antiaircraft guns. Enlisted members of the company also served as buglers, tailors, carpenters, orderlies, and medical crewmen. Observation balloon crews lived much like infantry troops, usually operating during the day and moving from one site to another at night. Night flight operations could only be conducted when the moon was bright. Like the infantry, they dug their own trenches, worked and slept in pup tents in the mud, and endured the onslaughts of the enemy, the "cooties," (World War I slang for lice) and the Army's supply system. Unlike the infantry, they were not relieved at regular intervals; because of the shortage of balloon units, many operated almost continuously at the front from the day they arrived. The 2d Balloon Company was the most extreme example—from the time it was assigned in February 1918 until Armistice Day, it was relieved only once, and then for only seven days. In his *Final Report of the Chief of the Air Service*, General Mason Patrick stated:

It is doubtful if the combat troops of any other arm of the service have operated so continuously at the front. Whatever measure of success has been attained by American balloon troops with the armies has been due to the determination of the personnel to overcome all obstacles and to work to the limit of human endurance in order to do their share toward defeating the enemy.

SINCE 1971 officials of the USAF Museum at Wright-Patterson AFB, Ohio, had tried to locate a World War I-era observation balloon. Members of the National Association of the American Balloon Corps Veterans (NAABCV), men who served in the U.S. Balloon Corps during World War I, adopted the search for a balloon as a "crusade." In early 1975, the NAABCV, through contacts with British World War I balloon veterans, finally discovered a Caquot Type R in possession of the Royal Aircraft Establishment (RAE) of Bedfordshire, England. Although this balloon was manufactured in 1944, the Caquot design had remained the same since 1918. Used for noncombat aerial observation and photography and for parachute testing, this sole-remaining balloon had made its last flight



An inflated Caquot balloon rests moored in its "bed" (above left) alongside its "nurse balloon," which held as much as 5000 cubic feet of hydrogen gas. The nurse balloons replenished observation balloons in the field. . . . Parachutes were often for the birds! During World War I, parachutes were still in the experimental stages, and balloon observers received no training in jumping or landing techniques.





On 2 April 1918 at the training school at Fort Sill, Oklahoma, a balloon exploded and burst into flames. The electrifying impact precipitated an immediate exodus.

in 1960. Once arrangements could be made, the Ministry of Defence, RAE, donated the Caquot to the USAF Museum for display.

Shortly after its arrival on 2 February 1976, the balloon was inflated with air to check for leaks. Because of its immense size, 92 feet by 32 feet, overhead suspension seemed to be the only practical display method. Unfortunately, the balloon fabric had deteriorated through age, and a way had to be found to keep the balloon inflated. To the best of their knowledge, a Caquot balloon had never before been displayed in a museum, so there was no past experience to draw on. Museum officials considered several alternatives, including filling it with a three-inch layer of polyurethane foam that would harden sufficiently for the balloon to hold an inflated shape; lining it with a lightweight plastic balloon cut to the same size to minimize leakage and filling it with air or helium; and repairing the weak areas, filling it with air or helium, and reinflating it as needed. After weighing the factors of fire safety, cost, and ongoing maintenance, officials decided that the last alternative was the most practical.

In September 1977, the USAF Museum accepted an offer of technical assistance from a company that had manufactured the Caquot balloon for the U.S. government during World War I, the Goodyear Aerospace Corporation of Akron, Ohio. Museum restoration personnel and Goodyear representatives subsequently patched weak interior areas and applied two coats of special rubber-based paint to the balloon's exterior. Staff members then designed and fabricated a suspension strap-cradle and air replenishment system. Three coats of paint, specially formulated and mixed for this purpose by Goodyear, brought the balloon back to the 1918 color and ready once again to "fly." Finally, in May 1979, the Caquot Type R was placed on exhibit over the World War I display area in the main display building.

U.S. Air Force Museum, Wright Patterson AFB, Ohio

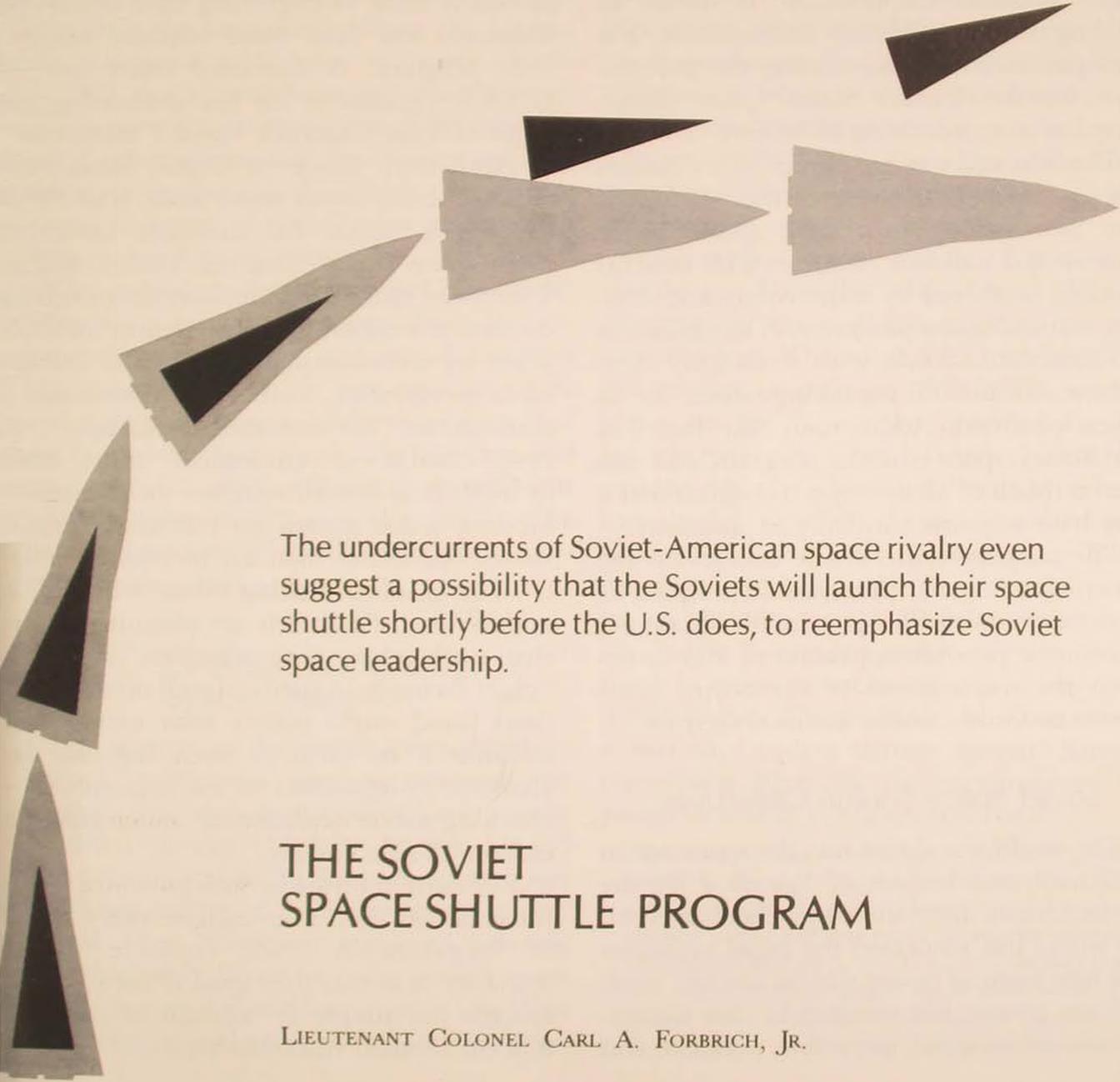
All photographs are from the USAF Museum collection.

Notes

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We keep Marx on our tongues and Allah in our hearts.

Uighur cadre in Peking,
Far Eastern Economic Review,
14 September 1979, p. 8.



The undercurrents of Soviet-American space rivalry even suggest a possibility that the Soviets will launch their space shuttle shortly before the U.S. does, to reemphasize Soviet space leadership.

THE SOVIET SPACE SHUTTLE PROGRAM

LIEUTENANT COLONEL CARL A. FORBRICH, JR.

IN OCTOBER 1978 the Soviet Union announced the spectacular news that it had developed the prototype of a winged, reusable manned space vehicle. Western open-source publications indicate now that the Soviet system includes the space shuttle vehicle and two launch vehicles: a vertical rocket launcher and a horizontal takeoff and fly-back launcher. Years of research and development must have preceded such an accomplishment, even if the Soviet space shuttle is only remotely comparable to that of the United States. Any such system requires a major national commitment in terms of funding and engineering development. For example, total funding during the past ten years in the United States space shuttle program is approaching \$6 billion.

The manned space program of the Soviets has continued actively since their first venture into space. Also, their space shuttle represents a national resource, with benefits that can be shared by both civilian and military manned space programs. A space shuttle provides the U.S.S.R. with a relatively inexpensive means of exploiting space to its fullest potential. Additionally, the fact that the Soviet space shuttle program has not been publicized all these years suggests that it may have important military applications.

The purpose of this article is to review the status of the Soviet space shuttle program as reported in Western open-source literature, to describe possible applications, and to develop the implications of the Soviet space shuttle to United States national security.

Soviet Space Shuttle Objectives

The world was thrust into the space age in 1957 with the launch of *Sputnik I* by the Soviet Union. Ever since this epochal event, the world has witnessed the rapid evolution of a new form of power which, like air, land, and sea power, has resulted in new dimensions to sociological, economic, political, and

military thinking. After Sputnik, both the United States and the Soviet Union have pursued programs which demonstrate the importance of space for scientific and military purposes. The United States manned space program essentially came to a standstill after the Apollo-Soyuz Test Project in 1975; however, the Soviet manned space program has continued doggedly onward. The implication of this persistence is that the Soviets believe man's utility in space is enormous and should be exploited.

Constraints on Soviet manned space exploration since its beginning have been significantly less than those imposed on the U.S. program. A concerted effort by the U.S.S.R. resulted in the first manned space flight of Yuri Gagarin's *Vostok I* mission on 12 April 1961. Since the United States won the race to the moon with Apollo 8 in 1968, the Soviet Union has annually launched more space flights than the United States. The Soviet space program, operating under a command economy, is apparently unhampered by economic constraints. The Soviets have performed numerous missions to demonstrate "the concepts of resupply and crew change—psychological, more than technological breakthroughs—that make the orbiting space station an everyday, routine workshop, rather than an individual, spectacular, headline-making event."¹ Indeed, it appears that the Soviets are planning extensive earth-orbit space activities, including "giant factories in the sky [and] orbiting stations [that] might collect solar energy and transmit it to earth or even regulate the chemical composition of the atmosphere—checking ozone depletion or monitoring the carbon dioxide balance."²

The current thrust in Soviet manned space missions has been to investigate every aspect of long-duration space exposure. Soviet scientists state that their goal is not to break records but simply to "remain in orbit, so that earth-based researchers can see what, if

anything, happens to [the cosmonauts]."³ On the basis of the data obtained, "the Soviets have stated that in the very near future they will expand the Salyut space station operations by docking additional structural elements to Salyuts already in orbit to form larger space stations."⁴ But no matter what the plans for and capabilities of space stations are, any estimate of the cost of the Soviet manned space program will show that it is very expensive. The fact that the United States temporarily halted its manned space program because of the great expense of one-time manned launches has been openly discussed in the literature.⁵ When the United States began consideration of a space shuttle in 1967, the projected cost of a manned mission was even then astronomical.⁶ It is probably a safe estimate that the Soviets came to the same realization about this time, if not sooner, because of their earlier involvement with manned space systems.

Given the facts that the Soviet Union is developing a broad technology base for expanded space missions, understands the costs of numerous one-time manned launches, and is intimately aware of the development of the United States space shuttle launcher and spacecraft, it is not surprising that the Soviets would develop their own space shuttle. The Soviets have now released preliminary information about that program.

Soviet Space Shuttle System Operation

Information on the Soviet space shuttle is limited in Western sources; however, the program has apparently never been rigidly classified in the U.S.S.R. In the United States *Aviation Week & Space Technology* has published articles on the Soviet program, and several West European technical journals have included papers on the Soviet space shuttle during the past four years.⁷ The West European journal articles are based on inter-

views with Soviet scientists or cosmonauts, and details vary from one source to the next. According to one author, the Soviets may not have publicized their development of a space shuttle in order to prevent another "space race." Maartin Houtman states that "if the Soviet Union were to acknowledge that a) they have a shuttle project, b) are several years ahead of the Americans, and c) that their program is better planned and more economical than the American one, this 'space race' would presumably lead, because of public opinion and its effect on American government, to hasty competition. . . ."⁸ Houtman further stated that as early as 1975, "various delegates at the latest (25th) Party Congress in Moscow were interviewed on the coming new space project that was to develop between 1976-1980 in the scope of the tenth Five-Year Plan into an operational 'cosmodrome in space.'"⁹

The earliest name for the Soviet space shuttle was *Kosmoljot*. "Dr. Artem Mikoyan (designer of the well-known MiG aircraft) used the term *Kosmoljot*, i.e., spacecraft" for this project as early as 1962.¹⁰ The earliest plans for the *Kosmoljot* provided for two launch approaches: one by vertical launching and the other by a horizontal runway launching, both launchers being reusable after separation from the *Kosmoljot*. These launchers are designed to carry the spacecraft to an altitude (about 30 kilometers) from which the *Kosmoljot* rocket engines can be fired to provide orbital injection energy.¹¹ Thus, technically speaking, the *Kosmoljot* is a two-stage rocket launch system. Russian cosmonaut Shatalov has summarized the Soviet technical considerations well:

The horizontal or aircraft start is definitely preferable for a reusable spacecraft, and we (the USSR) are taking this standpoint. However, the Americans chose a useful and less costly alternative, namely a vertical (rocket) start, that has the advantage that it can carry along a greater load each time. This design has undeniable advantages as well as drawbacks. . . . We have perfected the more ad-

vanced second shuttle device, which proceeds from a horizontal launching. This gives the further advantage, that the device can start from any airfield in the Soviet Union equipped for this purpose; this makes the system more flexible in mission operations.¹²

Soviet orbiter vehicle

The name *Kosmoljot* for the orbital vehicle is used almost interchangeably with the name *Raketoplan* (rocket aircraft). In 1976, Houtman stated that the *Raketoplan*, which is similar to the U.S. space shuttle vehicle *Enterprise*, was named *Albatros*. Every article on the Soviet space shuttle discusses the *Albatros* to some extent. In general, the orbiter is a delta-wing vehicle with a 7.9 meter (26-foot diameter) wingspan. The length of the spacecraft is estimated to be about 10.6 meters (35 feet).¹³ These details demonstrate that the Soviet space shuttle orbiter vehicle is substantially smaller than its American counterpart. The Soviet data further indicate that the *Albatros* is similar in most respects to the U.S. Air Force/Boeing X-20 *Dyna-Soar* vehicle.¹⁴ As Craig Covault has observed:

Successful development of this system could provide the USSR with the capability for high-frequency launch rates or a quick reaction manned launch capability for civil or military application. Although the cargo capacity of the Soviet system would be limited, high-frequency launch rates could facilitate the placement of large amounts of material in orbit for assembly into large space structures.¹⁵

The orbiter vehicle is in prototype now, and

has been drop-tested from a Soviet Tupolev Tu-95 Bear bomber in atmospheric tests designed to determine the aerodynamic and pilot handling qualities . . . comparable to those performed recently with a U.S. space shuttle orbiter.¹⁶

Even though these tests were announced in March 1978, some analysts believe that they may have occurred as early as 1975.¹⁷

Weight trend analysis based on vehicle

physical dimensions indicates that the *Albatros* weighs about 6800 kilograms (15,000 pounds). Since the SS-6 booster used to launch the Soyuz spacecraft has a capability of 7500 kilograms (16,500 pounds),¹⁸ the Soviets may be considering the launch of the *Albatros* with an expendable verticle rocket launcher during its initial flights.

The *Albatros* is equipped with both chemical rocket and electric propulsion rocket motors for orbital maneuvers.¹⁹ Orbital maneuver capability would be extensive for a period of over seven days with a crew of two or three cosmonauts. Reentry will be initiated using retrorockets. The *Albatros* would then skip along the outer edges of the atmosphere to dissipate orbital energy and reduce speed. When descending through the atmosphere, its aerodynamic control characteristics minimize heating, thereby lessening the need to use payload for that purpose. These descent techniques and the required heat shields have been tested by the Soviets in the unmanned Zond 5, 6, 7, and 8 series of spacecraft missions.²⁰

The Soviets plan to use the lifting-body capabilities and the on-board rocket propulsion systems to change orbital planes. To change orbit, the *Albatros* will initiate reentry procedures. As the vehicle dips into the atmosphere, aerodynamic forces will be used to accomplish course changes. When the new orbital plan is achieved, the rockets can be fired to insert the *Albatros* into a new orbit. According to Houtman, the *Albatros* design provides for enough fuel to make four of these maneuvers.²¹ This orbit-to-orbit capability gives it significantly more flexibility than the U.S. space shuttle, which is constrained to a single orbit for each launch.

Soviet launch vehicles

The Soviet space shuttle system includes two different launch vehicles. The simpler one is

a standard chemical-rocket booster with liftoff in the conventional vertical fashion. The more complicated and technically challenging launch vehicle is a booster that takes off and returns horizontally, much like a conventional aircraft.

The vertical launcher. When interfaced with the Albatros, the vertical launch system will be, in appearance, very much like the USAF/Boeing X-20 Dyna-Soar. European analysts "expect the 'Kosmoljot' to be launched initially by an expendable booster from the Tyuratam cosmodrome."²² Unfortunately, no details of the recoverable vertical launcher are yet available. The Soviets may be planning to mate the Albatros to a conventional chemical rocket booster as with any other orbital payload. This concept differs completely from that of the United States, in which the space shuttle is strapped to one side of the booster system.

The technology to demonstrate a vertical launch and orbital insertion of the Albatros is established. It would be fairly simple to fabricate an interface module to join the Albatros with an existing launcher such as the SS-6 booster, which has been used to launch the Soyuz manned satellites as well as the Progress unmanned tanker/transport satellites. It has been pointed out that the Soviet Union used ten expensive one-time booster rockets and as many Salyut, Soyuz, and Progress spacecraft to perform the recent Salyut 6 mission.²³ Had the Albatros been used to transport cosmonauts to a Soyuz spacecraft already in orbit and to perform the crew exchanges and space resupply flights, only one spacecraft would have been required. Had the reusable vertical booster been developed, the entire mission could have been completed with only one spacecraft and one booster. An economic consideration as significant as this must be recognized by the Soviets.

The horizontal launcher. The horizontal launch vehicle is similar in appearance to the

U.S. Space Shuttle/NASA Boeing 747 piggyback combination. The Albatros, in this more complicated mode, will be launched from the ground, mated to a fly-back booster. The fly-back booster will have a rolling takeoff, like that of a conventional aircraft. After separation from the Albatros, it will be flown back to its base for a conventional horizontal landing.

The available technical details of this booster are unclear, but the propulsion systems will have to be some combination of rockets and air-breathing engines,²⁴ with later phases requiring rocket or rocket/turbojet propulsion to reach the 30 kilometers (120,000 feet) altitude required before space vehicle/booster separation.²⁵ Though this is an extremely complicated booster design, a recent NASA-funded contract to Boeing has shown that new technology now available makes the idea feasible even for the U.S. space shuttle.²⁶ If so, then it will be significantly more feasible for the Soviet space shuttle, which is much smaller and one-tenth the weight of the U.S. shuttle vehicle. One important feature of this launch technique is that acceleration forces never exceed 2 to 3 G's; therefore, cosmonauts would not require special training for this phase of a space mission.²⁷

It is clear, then, that the Soviet Union is developing a space shuttle. With this fact established, some of the missions announced by the U.S.S.R. for the Albatros must be considered and potential missions of the Albatros postulated.

Soviet Space Shuttle Missions

The Soviets have stated that the Albatros will be used principally as a "space transport ship [much] like a moving van," delivering satellites into orbit and, later, after they have completed their mission, collecting "them again as a sort of interplanetary scaven-

ger. . . . The Albatros can presumably launch or fetch . . . dozens of large or small Kosmoses" with each mission.²⁸ In addition, the full range of scientific and technical investigation, such as visual satellite monitoring, real-time weather reporting, traffic control, earth-resources surveying, and space manufacturing can be undertaken. During the recent four-month-long Salyut 6 mission, the cosmonauts carried "a color chart and by matching up the hues of different parts of the ocean [could] map plankton and seaweed distribution, information that can provide tips on good fishing grounds."²⁹ Other experiments "involved biological studies of tissue cultures and bacterial growth, and processing of metals and glass."³⁰

The Albatros, with its extensive propulsion systems, can also be used as a form of space tug to gather abandoned Soviet spacecraft in orbit for assembly into a very large space station; numerous Salyut, Soyuz, and Progress vehicles in space could so be maneuvered into position. It is inconceivable that these expensive Soviet spacecraft remaining in orbit after only one mission will not be used in some way by the Soviets, who are known never to throw anything away. They have stated that the Salyut 6/Soyuz 25, 26, 27, and 28 mission "is a key part of a plan for establishing a permanent station in space, is designed to demonstrate, in addition to simple longevity in orbit, the ability for re-supply 'visits' by other Soyuz crews."³¹ Thus, they have a long-range plan in motion, which may soon involve the Albatros to build and supply a permanent space station. These are primarily the missions that the Soviets have openly discussed relating to the scientific and technological uses for the Albatros, but its military potentials must also be considered.

Since the Soviet space program is conducted by the military,³² some such application for the Albatros must exist. It is, of course, conceivable that the Soviet space shuttle could serve roles in such missions as

space resupply and space bombing. This possibility is strengthened by the Soviets' pursuit of a fractional orbit bombardment system (FOBS) until 1971.³³ Further support is offered in a U.S. Senate staff study asserting that the "Soviet military planners would be unimaginative if they did not think of the whole realm of possibilities and military consequences" of space warfare systems.³⁴ Recent activity in the Soviet Union indicates that satellite interception is a capability highly desired by the Soviets.³⁵ Yet one-for-one satellite interception is an expensive proposition. Such a mission may be more realistically and inexpensively performed by overtaking and collecting target satellites with a highly maneuverable spacecraft like the Albatros. Such an operation was dramatized in the opening scenes of the James Bond movie *You Only Live Twice*. Conceivably, the Albatros could carry rocket projectile systems for outright destruction of satellites in orbit if they were considered too dangerous to retrieve.³⁶ Possessed with these capabilities, Albatros spacecraft could either collect or destroy U.S. satellites at a cost much less than that of one-for-one interceptors, and there would be no question of verification. Target damage and kill verification could be performed visually on site.

Aside from these clearly overt military operations, satellite surveillance by electronic ferreting and visual inspection can be performed with an Albatros spacecraft. Such surveillance data can be used to design systems that would effectively jam early warning, navigation, and other monitoring satellites used in U.S. military support activities. Finally, activities on the earth's surface, by means of real-time surveillance, can be transmitted directly to military commanders in the Soviet Union as they are observed. All of these functions represent extremely valuable capabilities inherent in the Soviet space shuttle effort. The vehicle can be used to augment Soviet space capabilities rapidly

and, equally rapidly, to degrade U.S. military capabilities by the destruction or negation of military support satellites in orbit. Ultimately, Albatros spacecraft could be used to deny meaningful U.S. presence in the entire space arena by destruction of every satellite launched. The flexibility associated with two launch techniques permits orbital injection of the Albatros into any prescribed orbit; the U.S. space shuttle does not have this capability. Tied to launch from only two locations (either Vandenberg AFB, California, or Cape Kennedy, Florida), the U.S. shuttle is much more severely restricted as to available orbital planes than the Soviet space shuttle.

THE large orbiting Soviet space stations will be used for a great variety of scientific and technical activities. However, the Center for Strategic Studies has cautioned that "The Soviets are already committed to exploit space for military purposes."³⁷ The Albatros system is being developed by the military and probably can also be used as a space interceptor or bomber to perform a wide variety of military space activities. Possibilities range from covert satellite interrogations to more aggressive acts, such as function jamming, the overt collection of satellites from orbit, or their in-orbit destruction.

Space has been the scientific area to which the Soviets have been able to point with great national pride, having established an impressive list of firsts, highlighted by *Sputnik I* and the first manned space mission in the Vostok program. It is not inconceivable that they would release the details of the Albatros near the time that the U.S. is planning to launch its space shuttle. The undercurrents of Soviet-American space rivalry even suggest a possibility that the Soviets will launch their space shuttle shortly before the U.S. does, to reemphasize Soviet space leadership. Numerous examples of such technological

upstagings permeate the history of man in space. The introduction of a reusable shuttle represents the next opportunity in space for a spectacular technological first for some time to come. Such a Soviet first would subtly humiliate the United States as a global power by degrading its preeminence in science and technology, while magnifying that of the Soviets. Thus, there is a very real possibility that the Soviets may attempt to launch a space vehicle that they call a space shuttle, if for no other reason than for the prestige of the accomplishment.

The Albatros will be a relatively economical means for the Soviet Union to continue its space explorations and expand its military capabilities. But this expanded space capability also represents a formidable threat to those U.S. military operations that are dependent on satellite data. Thus, the U.S. must formulate strategic concepts for contending with the Soviet space shuttle, and its progress must be carefully followed and reviewed in order that countermeasures may be taken to neutralize any threat that may be posed to U.S. national security. General Jacob E. Smart, USAF (Ret), has cogently recommended a policy to guide our national and military attempts to overcome the threat posed by the Albatros:

Today and henceforth the United States must be prepared to defend itself against aggression *in* space and *from* space. We cannot surrender the "high ground" without contest. We must be in space to acquire knowledge of what others are doing there and to prepare to counter that which threatens us.³⁸

Air War College

Notes

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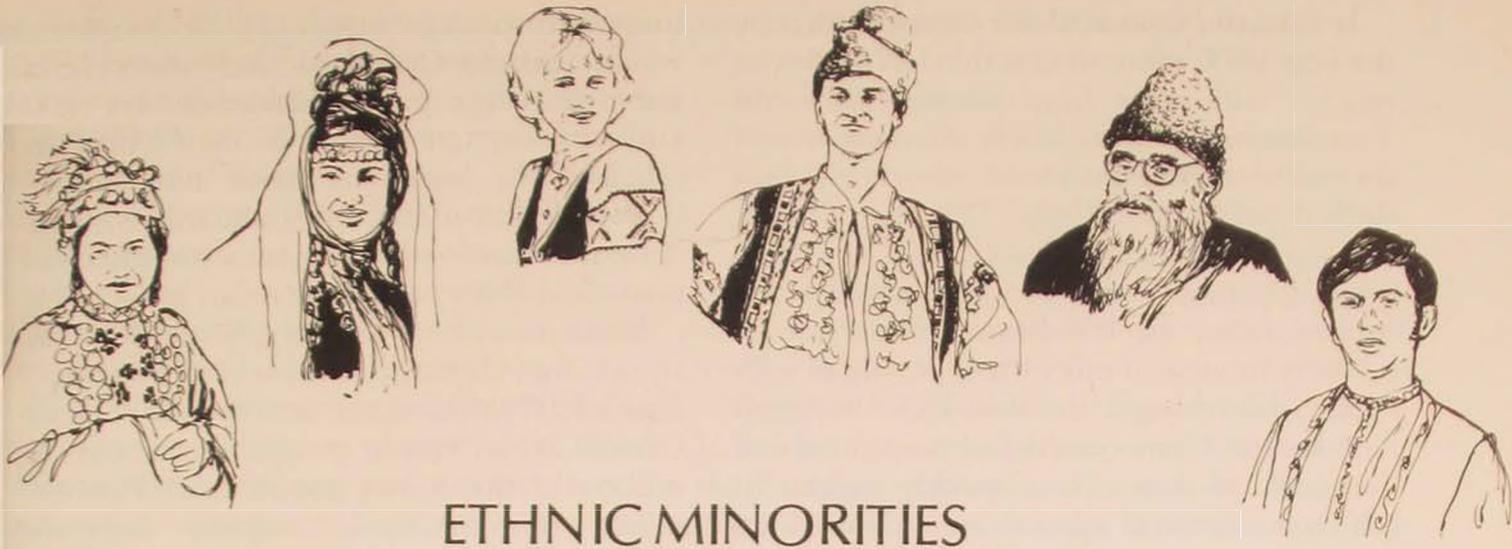
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8. Houtman, p. 29.
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14. Ibid.
15. Covault, "Soviets Developing Fly-Back Launcher," p. 19.
16. Craig Covault, "Soviets Build Reusable Shuttle," *Aviation Week & Space Technology*, March 20, 1978, p. 14.
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18. Charles S. Sheldon II, "The Soviet Interceptor Program," *TRW Space Log 1977* (Redondo Beach, California: TRW, Inc., 1978), pp. 2-5.
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21. Ibid., p. 31.
22. "Soviet Space Shuttle," *Spaceflight*, p. 211.
23. "Soviets Confirm Shuttle Vehicle Effort," p. 25.
24. Hofstaetter, p. 31.
25. "Soviet Space Shuttle," *Spaceflight*, p. 211.
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27. "The Kosmoljot Is the Soviet Version of the Space Shuttle," p. 299.
28. Houtman, p. 31.
29. Piper, p. K2.
30. Ibid.
31. "Spacecraft Details," *TRW Space Log 1977* (Redondo Beach, California: TRW, Inc., 1978), p. 30.
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36. Clarence A. Robinson, Jr., "Soviets Test Beam Technologies in Space," *Aviation Week & Space Technology*, November 13, 1978, p. 16.
37. *The Soviet Military Technological Challenge* (Washington, D.C.: The Center for Strategic Studies, 1967), p. 86.
38. Smart, p. 24.

Editor's note

This study is an unclassified abbreviated version of a more detailed classified paper available through Air University Library and Defense Technical Information Center to authorized users.

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- The Case for the MX
- The Case against the MX
- History and the Profession of Arms
- The Entebbe Raid
- U.S. Strategic Forces



ETHNIC MINORITIES IN THE SOVIET MILITARY

implications for the decades ahead

LIEUTENANT COLONEL DALLACE MEEHAN

WHAT one writer has described as a “time bomb of suppressed minorities”¹ poses more than just a sociological problem for the Soviet Union. Of equal or perhaps greater importance is the impact these ethnic minorities are quite likely to have on the Soviet armed forces in decades ahead. Soviet demographic trends, specifically the disproportionately high growth rates among the Moslem peoples, suggest a plethora of potential problems to plague the Soviet military leadership in coming years.



It has been estimated, for example, that by the year 2000 more than a third of all Soviet recruits will come from Central Asia and Transcaucasia.² This article discusses two of the more salient problems associated with these demographic trends. The first of these, ethnic strife between Russians and non-Russians, must be considered a potentially disruptive factor in the Soviet military, particularly in view of our own experiences with racial disturbance in the U.S. military. Another problem considered here, and one that perhaps does not as quickly suggest itself, is a matter of special importance to an increasingly modern and technologically sophisticated military force, the problem of language proficiency.

Demographic Trends

Current best estimates of U.S.S.R. population range from 261.3 million by the London-based International Institute for Strategic Studies (IISS) to 262 million by Soviet demographer Boris Uralnis.³ (Previous official postwar censuses were conducted in 1959 and 1970, and results of a third are expected in the near future.)

It is fashionable to refer to the Soviet Union as a cornucopia of ethnic diversity: more than a hundred different nationalities speaking some 150 separate languages and dialects. Yet numerous as these various groups are, the fact is that most of them are so small that they are of interest only to anthropologists, linguists, and social demographers. From a political-economic standpoint, ethnic groupings in the U.S.S.R. can be classified as follows: (1) Slavs, which include the Great Russians, Ukrainians, and Byelorussians (White Russians); (2) Moslems, which include the peoples of the Central Asian republics (Kirgiz, Turkmenians, Uzbeks, Tadzhiks, Tatars, and Kazakhs) and Kazakhstan, nearly all of the Sunni Islamic faith and Turkic by racial and

linguistic background; (3) Caucasians, which include Georgians and Armenians, somewhat close to the Moslems in culture and economy but separate by their Christian religion; (4) Jews; (5) Baltic nationalities (Latvians, Estonians, and Lithuanians); and (6) numerous West Europeans (mostly Germans and Poles) and East Asian groups.⁴

Moslem-oriented and largely non-Russian speaking Uzbeks, Tatars, Tadzhiks, Bashkirs, Turkmenians, and dozens of other Central Asian ethnic groups total about 50 million of the Soviet population.⁵ Furthermore, within the Slavic "majority" there are significant national differences in language, culture, and history even among Russians, Ukrainians, and Byelorussians, to say nothing of their differences from still other nationalities such as Armenians, Georgians, Moldavians, Lithuanians, Latvians, Estonians, and Jews. This article, however, focuses on the more readily apparent and potentially more serious problems associated with the vast linguistic and ethnic discontinuities between the Russians and the Central Asian peoples and, more specifically, how these differences will have an increasingly disruptive effect within the Soviet armed forces.

While current population figures illustrate the ethnic and linguistic diversities of the Soviet Union, it is the *trend* in demographic distribution that presents Soviet leaders and especially the military leadership with serious problems in the decades ahead. For despite the cultural diversity and the multinational character of the Soviet Union referred to already, the primacy of Russia and the Russians has been an unmistakable characteristic of the Soviet system. That primacy is now being seriously threatened.

In the face of myriad demands made by conditions in the Soviet Union (such as the shortage of apartment space and the growing need for both partners in a marriage to work), birthrates throughout European

Russia have fallen sharply in recent years. The population of Russia is now static and is even projected to decline in the years ahead. The 1958-59 to 1974-75 gross reproduction rates in the Russian Soviet Federated Socialist Republic (R.S.F.S.R.), the Ukraine, and Byelorussia, for example, dropped from about 1.25 (1 represents a static population) to an exceptionally low 0.98 in Russia, 1.0 in the Ukraine, and 1.08 in Byelorussia.⁶

Meanwhile birthrates in the Central Asian republics have soared to a current rate three times as high as the national average, largely as a result of different cultural values and aspirations, and, in part, paradoxically enough, because of Soviet-sponsored improvements in health and welfare. Moslem women, for example, tend to shun outside work, preferring instead the care of the home and rearing an average of six children per family.⁷ In 1974-75 gross reproduction rates in the four Central Asian republics of Turkmenia, Kirgizia, Tadzhikistan, and Uzbekistan ranged from 2.33 to 3.07.⁸ And even more important, because of differences in demographic changes among various age groups, the coming decades will see the Central Asians become the Soviet Union's largest incremental source of able-bodied manpower. This trend becomes especially significant in view of the fact that manpower problems are stiffening throughout the Soviet Union with serious shortages likely in both the civilian and military sectors. A. V. Bachurin, vice chairman of the State Planning Commission (GOSPLAN), pointed out that the annual increase in able-bodied cadres has fallen steadily from 2.8 million in 1976 to 2 million in 1979 and will decrease to 1.5 million in 1980.⁹ The bulk of these new manpower "cadres" will be made up of young Moslems with rudimentary education, lacking fluency in Russian, and requiring enormous assistance to acquire the technical skills necessary for both Soviet industry and a modern military. This situation was clearly

recognized by party leader Leonid Brezhnev, who noted in his speech to the 25th party congress in 1976 that:

This emphasis on effectiveness—and one has to speak about it time and again—is the most important part of our whole economic strategy. In the 1980s, the fulfillment of this task becomes especially pressing. This is chiefly due to the *aggravation of the problem of labor resources*. We shall have to rely not on enlisting additional manpower but solely on increasing labor productivity.¹⁰

Projected population figures for the U.S.S.R. indicate that an ever increasing share of future growth will occur in Central Asia, Kazakhstan, and the Transcaucasian republics reaching more than seven times the R.S.F.S.R. rate in Kazakhstan and Transcaucasia by 1990 and a startling 142 and 147 times the Russian rate by 2000. (See table.) The trend is even more incredible with regard to the projected increases in the Central Asian republics. Projected rates of increase there will exceed those of the Russians by a factor of 13 in 1990 and an incredible 291 by the year 2000!¹¹ While actual figures may vary from these projections, the overwhelming trend is not likely to and portends an ominous future for Soviet society.

Nor are these trends overlooked by Soviet officials who, short of resorting to Stalin-like tactics of forced relocation and mass extermination, appear powerless to stem them. Thus, one can witness hypocritical and confused policies designed on the one hand to encourage births among Russians while on the other to discourage them among non-Russians. In July 1974, for example, it was announced that women giving birth to ten or more children would be eligible for a "Glory of Motherhood" order and a Motherhood Medal. Low-income families also receive additional incentive in the form of a nominal subsidy of 12 rubles per child per month.¹² Meanwhile, oblique racial slurs are cast with regard to large families in the Central Asian republics. Soviet demographer G. Litvinova stated this year that:

The state has an interest not only in the quantity of its citizens but also in their quality. It matters to the state what sort of population or what sort of manpower is increased—whether these people have a high or low degree of mobility or by virtue of a number of circumstances (including a tendency to have large families or a language barrier) are tied down to a specific region. The large family is becoming an outmoded demographic type, the support of which cannot be successful and can hardly be desirable.

She also proposed a demographic policy that would attempt to "stimulate birthrate where it is low and encourage its reduction where it is high."¹³ Clearly, the Soviet leadership recognizes the problem inherent in demographic trends but appears perplexed and confused as to how best to deal with them.

Racial Tension in the Soviet Union

The heart of ethnic minority problems in the Soviet Union lies in the Central Asian republics, and while one can find numerous examples of racial tension elsewhere, indeed throughout the U.S.S.R., a brief discussion of the cultural, linguistic, and religious characteristics of the four largely Moslem republics is in order.

When Soviet power was established in Central Asia in the 1920s, one of the first tasks of the Bolsheviks was to set up central administrative control and eliminate any possibility of cohesion among the various peoples of the region. A plan was devised and adopted in 1924 to collect peoples of the

Demographic statistics for the U.S.S.R. by republic and region 1950–2000*

		1950	1960	1970	1980	1990	2000
Russia (RSFSR)**	Births	26.9	23.2	14.6	16.7	13.7	12.4
	Deaths	10.1	7.4	8.7	10.2	11.3	12.3
	Increase	16.8	15.8	5.9	6.5	2.4	0.1
Transcaucasia (Georgia and Armenia)	Births	27.9	34.6	23.9	25.0	24.3	21.1
	Deaths	8.5	6.6	6.6	6.9	6.8	6.8
	Increase	19.4	28.0	17.4	18.1	17.6	14.2
	Ratio to RSFSR	1.1:1	1.8:1	2.9:1	2.8:1	7.3:1	142:1
Kazakhstan	Births	37.6	37.2	23.4	26.0	24.4	21.7
	Deaths	11.7	6.6	6.0	6.7	6.8	7.0
	Increase	25.9	30.6	17.4	19.3	17.6	14.7
	Ratio to RSFSR	1.5:1	1.9:1	29:1	3.0:1	7.3:1	147:1
Central Asia Republic	Births	31.7	38.6	33.3	36.5	36.8	34.0
	Deaths	8.8	6.0	6.0	6.2	5.5	5.0
	Increase	22.9	32.6	27.3	30.5	31.3	29.1
	Ratio to RSFSR	1.4:1	2.1:1	4.6:1	4.7:1	13:1	291:1

*Murray Feshback and Stefan Rapawy, "Soviet Population and Manpower Trends and Policies," in *Soviet Economy in a New Perspective* (Washington, D.C.: U.S. Government Printing Office, 1976), p. 123. Papers submitted to the Joint Economic Committee, U.S. Congress, October 14, 1976.

**RSFSR (Russian Soviet Federated Socialist Republic)

Sources: 1950–1970, "Noseleniye SSR, 1973; Statisticheskiy Sbornik," Moscow, Statistika, 1975, pp. 10–11, 69–83. 1980–2000, Foreign Demographic Analysis Division, "Estimates and Projections, USSR," March 1976.

same basic languages, and the four union republics of Kirgizia, Tadzhikistan, Turkmenia, and Uzbekistan were established. Native written languages were changed three times, from the traditional Arabic alphabet, to Latin script, and then to Cyrillic script with local special letters to accommodate spelling and pronunciation variations. Like the other 11 union republics, those of Central Asia theoretically have the power to adopt their own foreign policies, raise their own armies, and even secede from the Soviet federation. In practice, of course, these rights exist only on paper. All of the republics do, however, have their own unicameral legislatures and send delegates to the Supreme Soviet which meets annually in Moscow.¹⁴

Kirgizia, easternmost of the Central Asian republics, borders on Sinkiang, China. Its population of around three million consists mostly of Kirgiz, Moslems who speak a Turkish-based language. Tadzhikistan borders on Sinkiang and Afghanistan and has a population of about 3.5 million. Tadzhiks, who number around two million, are of both the Sunni and Ismaili Moslem sects and speak a Persian dialect. Turkmenia, largest of the Central Asian republics, borders Afghanistan and Iran and has a population of about 2.5 million, more than 65 percent of whom are native Turkmenians, Moslems who speak a Turkish-based language. Uzbekistan lies to the north of the other Central Asian republics and is the most populous with some 13 million people; the majority are Uzbeks, who also speak a Turkish-based language and are predominantly of the Sunni Moslem sect.¹⁵

Attempts to "Russify" these and other ethnic minorities of Central Asia predate considerably the founding of the Soviet Union and indeed go back at least to the Middle Ages when a young Muscovite state tried to shake off the Tatar yoke brought on by the Golden Hordes of Genghis Khan in

the thirteenth century. It was some three hundred years before Russian conquest of Moslem lands was completed, and for still another two centuries and more the Russians practiced a rigid policy aimed at the absorption of the Moslem community. Recognizing the futility of Russification, Catherine II stopped the policy of forced assimilation, and for almost a century afterward relations between Russians and Moslems were marked by tolerance, if not amity (a relationship strikingly similar to that which has existed for the past three or four decades). Catherine's liberalism ended around 1860, however, when a new period of intense pressure on Islam began under the influence of emerging Slavophile ideas of Russian Orthodoxy. Policies comparable to those during the Stalin era of the 1930s and '40s were adopted in a brutal attempt to assimilate the Moslems—and met with much the same result. The peoples of Central Asia were forced into relocation, their languages were modified, and Russian administrative and economic controls were imposed. But ethnic and religious awareness was not erased. On the contrary, it was revived to new levels and forced Russification merely provoked a deeper and more abiding aversion to nearly all things Russian. On the eve of the Russian Revolution, then, a product of modern times was born among the peoples of Central Asia—nationalism.

Soviet policies of Russo-Moslem relations appear to continue in cyclic tradition; relative liberalism under Lenin, forced assimilation under Stalin, and finally a modern version of Catherine's policy of tolerance and recognition of fundamental ethnic, religious, and linguistic differences under the present Soviet leadership.

Contemporary Russo-Moslem relations, however, are further complicated by the disproportionate demographic trends referred to earlier. These changes will undoubtedly intensify racial tension as the Great Russians,

well known for their chauvinistic tendencies,¹⁶ begin to see their primacy threatened.

That the Soviet leadership recognizes the danger of excessive "nationalism" among the various republics is made clear in frequent and numerous pronouncements by party officials. E. A. Shevardnadze, candidate member of the ruling Politburo, for example, had this to say at a party conference in 1979:

demonstrations that broke out in the Georgian capital of Tbilisi in April 1978,¹⁸ and while such developments in the Soviet armed forces receive little publicity, there have been reports of racial problems between Russians and non-Russians in the Red Army. Some non-Russians have been calling for the creation of "national" units,¹⁹ a development the very thought of which must cause



LITHUANIAN



LATVIAN



KAZAKH

The works and actions of *some comrades* in the recent past have still displayed elements of national narrowmindedness and Chauvinist deviations . . . We must step up the struggle against *harmful traditions and customs* . . . These traditions frequently conceal a philistine, petit bourgeois mentality . . . and national narrowmindedness.¹⁷

It should be pointed out that in official Soviet jargon, "some comrades" refers to party members who have dared to deviate from the party line and are being well advised to mend their ways or suffer the consequences.

Ethnic conflict was the root cause of

Kremlin leaders to cringe.

National consciousness among both Russians and non-Russians has also been stimulated by the border clashes between Soviet and Chinese forces. Military leaders are among the first to realize the implications of a potential invading Chinese force, which, if it manages to penetrate the first layer of Russian border defenses, will find not more Russians, but Uzbeks, Kazaks, Kirgiz, and other Asians whose allegiance to the Soviet Union is problematic at best. An increasingly popular taunt thrown by Central Asian ethnic

minorities to their Russian administrative officials during procedural or ideological squabbles is: "Just wait till the Chinese get here, they'll show you what's what!"²⁰ Furthermore, Peking can be expected to step up propaganda efforts to discredit Soviet racial policies and further foment unrest among minority groups, especially in those areas bordering on China.²¹

It is conceivable that this kind of attitude led Major General Vitaly Savin, commenting in *Krasnaya Zvezda* (*Red Star*) on the quality of Soviet draftees, to state that:

Some evaluations coming back to the military district committees and the organizations of DOSAAF (combined army-navy-air force youth auxiliary) are evoking concern. They demonstrate that in our work there are still shortcomings.²³



The traditional practice of giving recruits from the minorities of Central Asia demeaning assignments and unskilled jobs because of their low linguistic and technical proficiency will become increasingly more difficult as these troops continue to grow in numbers proportional to Russians. Resentment toward Asiatic minorities among Russian military members has already been noticed. Interviews with Russians have disclosed a prevalent attitude among them that Central Asians as a whole are "lazy, incapable, and with no desire to learn or do well."²²

Further evidence that the matter of national differences is indeed a concern in the Soviet armed forces can be inferred from an article by Major General N. Ivanov. In a typically Soviet style of self-contradiction, Ivanov explains: "The creation of a socially homogeneous society has nothing in common with unification of the way of life, that is to say with eliminating individual distinctions." He then exhorts members of the armed forces to fulfill their "sacred duty" to the defense of the Motherland "irrespective of their race and nationality, religious beliefs,

settled way of life, (and) social and property status."²⁴ So much for social homogeneity!

In light of our own experiences with racial disturbances in the U.S. military services, we can agree with Helene Carrere d'Encausse, who, in her recent book *L'Empire éclaté*, concludes that the conflict between European and Asiatic Russia will pose problems during the next two decades that will be "almost insoluble," generating explosions of popular discontent on a scale that has not been seen

numbers of non-Russians in the armed forces—problems that we in the United States have for the most part been spared and, therefore, might tend to overlook. Because of a general lack of proficiency in the Russian language among Central Asian Moslems, the Soviet military will be faced with countless problems associated with poor linguistic communications. Not only does this bear on the efficiency of basic command language but also has important implications



TURKMEN



MOLDAVIAN



BYELORUSSIAN

for many years. She also contends that the increasing proportion of non-Slavs, particularly Moslems, in the Soviet armed forces will breed bitter resentment against the exclusively Slav (predominantly Russian) command structure.²⁵

Language Difficulties

Despite the dangers of racial strife discussed earlier, the Soviets are faced with more direct problems posed by the growing

for printed training materials, technical orders, maintenance manuals, servicing procedures, and radio communications.

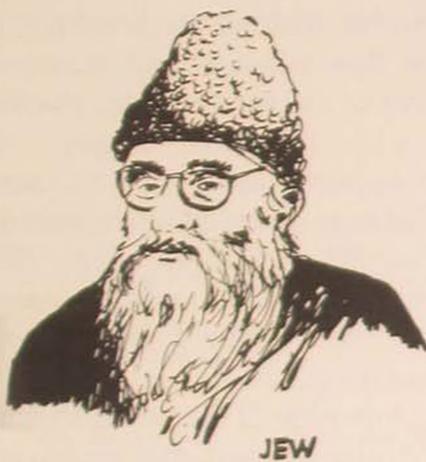
Attempts by Soviet leaders to spread the use of Russian have been an integral part of the "Russification" of the non-Russian republic from its outset. In a recent article L. Zabarskaya emphasized that:

... the Russian language plays a big part in the development of the multinational Soviet society ... it is impossible to develop all spheres of science, culture, technology, to conduct correspondence and

keep files in all the 130 languages functioning in the USSR. . . . As a language of communication between the nations and nationalities of the USSR Russian has played a big role in bringing them together.²⁶

One need not look far, however, to find evidence that Soviet leaders have in fact failed in their attempts to bring the nations and nationalities together through the use of the Russian language. In his review of a book concerning the Russian language as a means of communication between nationalities,

must be made in the professional training for teachers of Russian who will be working in national language schools. "It is common knowledge that a great many of the students who enroll in . . . teacher training institutes are seriously deficient in Russian."²⁸ A continuation of the report from the conference revealed that "students intending to become Russian language teachers *can't speak the language*, never having had the opportunity to do so in all their 17 years."²⁹



Professor Yu. Belchikov stated that some "58 million people are not fluent in Russian or know no Russian at all" and ". . . it is no secret that often secondary school graduates cannot speak or read Russian very well."²⁷ In a report from an all-union scholarly conference, First Secretary of the Kirgizia Republic, T. U. Usbalivev, commented on the "poor command of Russian among many graduates of the secondary schools where instruction is in the Kirghiz language." The report concluded that serious improvements

Some party officials within the Moslem republics, however, clearly resist imposition of the Russian language on their peoples. A leading editorial in an Uzbek newspaper served as a reminder that Lenin, though he recognized the facility of a common language, was careful not to insist on its forced usage.

V. I. Lenin wrote in 1914: ". . . and we stand of course for the opportunity to learn the great Russian language for every inhabitant of Russia. There is only one thing that we do not wish—the element of

compulsion." Those who by virtue of their life and work require knowledge of the Russian language will learn it without the stick.³⁰

But nowhere more than in the armed forces could language proficiency and communicative ability be more important, especially during a period of rapid technological development of sophisticated weapon systems. Soviet forces will be conscripting ever larger numbers of their recruits from the Moslem minorities just when there are fewer and fewer "nontechnical" positions to place them in and while the numbers of Russian conscripts will be steadily declining. Lieutenant General V. Skubilin, chief of aviation engineering service (air force maintenance), emphasized that "the times have set for aircraft specialists the task of mastering the pinnacles of scientific and technical thought." Obviously unhappy with the present state of technical training in Soviet air force maintenance units, he added:

... shortcomings which have been tolerated in certain subunits in the past should be eliminated. Poor preparation of supervisors and the students ... have lowered the quality and effectiveness of technical training.³¹

And perhaps most revealing of General Skubilin's concern for the growing need for "quality" recruits to meet requirements of an increasingly technical and sophisticated air force was his conclusion.

In each year, we see an inevitable increase in the requirements of aviation specialists, the level of their professional skills, and consequently, of the quality and organization of technical training. A constant improvement in the technical caliber and skills of flight and technical engineering (maintenance) personnel is the most important condition for successful solution to the problems facing the units and subunits of the Air Force.³²

The fact of the matter is that General Skubilin, like other Soviet military leaders, will have to rely more and more heavily on increasing numbers of Central Asians to meet those requirements. Furthermore, he

can expect stiff competition for their recruitment from the civilian sector of the economy, which is itself suffering severely under the impact of a declining work force. Results of a survey conducted by Moscow's Central Statistical Board revealed that more than half (57 percent) of all families in the R.S.F.S.R. had only one child.³³

THE United States has been referred to as the world's fourth or fifth (depending on the source consulted) largest Spanish-speaking nation. This does indeed have certain sociological implications. One must not overlook the fact, however, that the overwhelming majority of these Spanish-speaking minorities are immigrants or the sons and daughters of immigrants who live here largely by choice—for the opportunities, real or perceived, not available to them in their native lands. More than 90 percent of them are functionally literate in English and they tend to share one of the major religions of America.

The U.S.S.R., however, is the world's fifth most populous Moslem nation, and its Asian population is growing far more rapidly than the long dominant Slav, particularly Russian, population. By the end of this century, the Moslem population of the U.S.S.R. is likely to exceed 100 million—and less than a third of them will speak Russian. Soviet Asians will soon become the single largest source of new manpower for both industry and the military. The Soviet leadership will face complex and difficult questions in the coming decades involving racial tensions, ethnic resentment, and all the ramifications of national identity, including religion, culture, and especially language. Many of these problems will remain partially ameliorated within civilian society because of geographical concentration within the national republics and a sense among the various Moslem peoples of "nationhood" in their na-

tive lands, if only as a part of a larger Soviet state.

It is in the military, however, that these conditions will prove even more disruptive and likely to reach explosive proportions in the decades ahead. Moslem recruits in ever increasing numbers will be forcibly cast into a Russian dominated system alien to their culture. An exclusively Slav and predominantly Russian command structure will serve as a constant reminder of the inferiority of the minority recruits. Linguistic barriers will not only fan the flames of racial resentment but will seriously undermine proficiency, procedures, and technical excellence, especially in highly technical areas such as

electronics, radio-radar communications, aircraft and missile maintenance, and other high-skill specialty areas.

There is little that the present Soviet leadership can do to cope with these developments. Racial tension and the swelling tides of nationalism seem clearly on the way to becoming disruptive forces in both Soviet society and in the Soviet military.

François Schlosser observed recently that "at the current rate of development, the late 20th-century version of 'homo soveticus' will be steeped in Moslem civilization, and his white Russian skin will have turned yellow."³⁴

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Notes

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THE purpose of the educational benefit portion of the GI Bill of Rights—to make service in the U.S. Armed Forces more attractive by “extending the benefits of a higher education to qualified and deserving young persons who might otherwise not be able to afford such an education”—was established by Congress.¹ It ultimately helped millions of people achieve vocational and educational status who might not have attained these objectives had they not served their country.

THE MILITARY AND THE CIVILIAN ECONOMY SINCE THE LOSS OF THE GI BILL

CECILE S. LANDRUM

The GI Bill program following the Second World War initially gave one-year educational benefits to all persons serving at least ninety days, regardless of the type discharge. In addition, for time spent in the active force between 16 September 1940 and 25 July 1947, additional benefits accrued up to a total maximum of four years. The Korean conflict GI Bill program gave veterans one and a half months of benefits for each month of active duty served and was designed as a means of vocational readjustment and restoration of lost opportunities to those whose careers were interrupted or impeded by reason of active duty before 31 January 1955. The 1966 law for Vietnam veterans originally gave one-month benefits for each month of service up to thirty-six months' benefits.

terminating the educational benefits of the GI Bill

In 1975 two proposals to terminate the GI Bill and subsequently those benefits described were presented and passed in Congress,² thereby reducing the GI Bill educational benefits to those joining the services after 1 January 1977.

The program at that time was costing approximately \$5 billion annually and providing benefits to over two million former service people.³ This became a case of considering subjective needs versus extensive costs during the initial All Volunteer Force period where financial constraints began to take precedence over all other considerations. What the demise of the GI Bill would mean to the socioeconomic balance of the forces, minorities, the sustainability of the All Volunteer Force, the quality of enlisted personnel, educational institutions, and the tax base were all being weighed in terms of pure economics.

One study conducted at that time predicted that the termination of the GI Bill

would hinder enlistment incentives which "help insure the ideological socio-economic balance of the all voluntary military period." Based on indicators, the study predicted that one-third of the number of potential recruits who were planning on a college education would not join the military without the availability of these educational benefits. The study also predicted that potential recruits would be dropouts or people with below-average high school grades.⁴

In 1977, 43.9 percent of enlistees in the U.S. Army were non-high school graduates.⁵ This appeared to confirm predictions that, with termination of the GI Bill, a decline in recruiting would occur among the white middle-class and suburbanites, while the increases in recruits would be mainly from minorities and youth from the inner city, resulting in a shift in the total balance of the socioeconomic background.⁶ This has subsequently proved to be true, although not documented as being a direct result of the termination of the GI Bill; the perceived or real loss of benefits has been generally blamed for the recruiting problems, and the GI Bill reduction is a prime example.

A wide cross section of people not only provides a socioeconomic balance but also assures a military which, hopefully, will be more responsive and responsible to civilian interests. They are the disabled veterans, the infantry-related personnel, and large numbers of minorities. And, ironically, the minorities have increased in numbers since the termination, many because of poor economic conditions⁷ and the pay incentive, which in fact attracts more of the lesser-qualified youth.

the GI Bill and minorities

While black representation accounted for 12 percent of the force in the 1960s—a comparable figure to its representation in society—the proportion of blacks has more than

doubled since pre-Vietnam days. With the addition of nearly 5 percent Hispanics, approximately 30 percent of today's recruits are from minorities.⁸ And it is these groups that are being most affected by termination of the GI Bill; having been denied ready opportunity, they need access to education the most. To state this Catch-22 situation in yet another way, one-half of the blacks and one-third of the whites who left the service in 1970 were in military occupations that were not readily transferable to civilian jobs. Yet, the demands of their military jobs prevented them from securing additional education while in service.⁹ Although this situation has changed significantly since the end of the Vietnam War, it is still difficult for many military personnel to obtain any formal college-level education before leaving the service.

GI Bill benefits have existed for more than three decades, but it was not until the late 1960s that minorities began to take advantage of these educational opportunities for upward mobility in any significant numbers. Programs that provide educational and upward mobility benefits become critical national measures to combat unemployment and thereby fulfill the original economic readjustment purpose of this legislation. As the services' minority population greatly increases, especially in the army, the problem created by the termination of the bill as predicted is exacerbated. For many blacks, the military became an alternative to the streets, despite any inequities that might be felt. The Congressional Black Caucus was clearly sensitive to this pending problem, as all members of the Black Caucus voted against the repeal measure in House Bill 9576, despite the attractive provisions of the total bill.¹⁰

the All Volunteer Force—the GI Bill

Many people felt that the All Volunteer Force initially benefited from a period of high unemployment and attracted many up-

ward mobile young people who would have sought opportunities elsewhere if they were available.¹¹ The Defense Manpower Commission concluded that "the sustainability of the All Volunteer Force during peacetime will depend upon the economic situation and other interrelated facts some of which—such as public attitudes toward the armed forces—cannot be predicted with any certainty."¹²

The economic situation began to turn around in 1976, and indicators of its subsequent impact have begun to emerge. The employment rate in late 1976 was 7.9 percent. That rate as of March 1978 dropped for the fourth consecutive month to 6.1 percent, the lowest rate since October 1974.¹³ The Congressional Budget Office predicts an unemployment rate of just over 4 percent in 1982.¹⁴ This trend easily raises the question of the ability to recruit for and sustain the All Volunteer Force in a competitive environment, especially when the perceived erosion of benefits begins to take on more of a consequence.

The bill, as a wartime benefit, became a major argument of those wishing to terminate it. The Ford administration, in taking a position against the continuation of the bill, expressed concern that since the war has ended, benefits should also end. They did not consider that today's society is different, as are its needs. The thinking should have changed and recognized the benefits to the total society rather than being tied to historical precedence. Two additional arguments used against maintaining the bill were that significant numbers of people abused the programs and/or left the services solely to take advantage of the educational opportunities. These were minimal management problems and should have been handled as such. They should not have been used as justification for abolishing the program, but instead should have served as incentives to better monitor the enforcement of standards or progress in the program.¹⁵

*the GI Bill as an
incentive toward recruitment*

From the inception of the All Volunteer Force, numerous studies have been conducted to examine attitudes and incentives for joining the U.S. Armed Forces. These studies generally indicate that a high priority is placed on educational benefits as incentives for recruitment and retention in the U.S. Armed Forces. However, in following the recommendation of the Gates Commission to increase pay as a recruiting tool, the services were faced with the dilemma of "more visible pay" being a double-edged sword. Surveys show that high pay motivates less qualified youth (e.g., high school drop-outs, those with poor grades) to join the service.¹⁶

While the GI Bill was not used as a recruiting tool (because its funding came from the Veterans Administration), one study indicates a potential loss of one-third of the potential recruits who plan on a college education.¹⁷ In addition, a 1975 study by the Manpower Research and Data Analysis Center (MARDAC) of 13,000 army people indicated that 21 percent would not have joined the services without the GI Bill, while 12 percent of the group indicated that the college educational benefits were the determinants of why they entered the service. Another army in-house survey of more than 50 percent of the army volunteers indicated that 25 percent would not have enlisted without the GI Bill benefits. While these predictions varied in number, the negative impact of these losses becomes more significant as the numbers grow. Although a 5 percent loss was considered insignificant, losses from 15-30 percent would have several impacts economically and professionally.

Earlier studies such as the *Gilbert Youth Surveys* and *Youth in Transition* by Johnston and Buchanan, which were completed in 1970, reached similar findings concerning education as a priority. The *Gilbert Youth Sur-*

veys found money as an incentive for joining the services to be somewhat higher than education (19 percent compared to 12 percent), but those selecting education as a priority had higher abilities.¹⁸ The University of Michigan study also concurred that those attracted to the services because of the GI Bill are more intelligent, possess greater ability, and have leadership capabilities.¹⁹ The Johnston and Buchanan survey of 1273 men concerning recruitment incentives indicated that 24.5 percent favored paid education as an incentive, a 10 percent higher percentage over pay as an incentive. Additionally, those young people favoring paid education over higher pay scored higher in intelligence tests, occupational ambitions, and self-esteem. Other surveys during that period supported these findings and indicated that those who had selected education and training incentives had a higher propensity to enlist.²⁰ The availability of and possibility of educational opportunities also have a positive impact on reenlistment.²¹

These findings certainly indicated at that time that there needed to be concern about the sustainability of a quality force. This was again substantiated in a 1977 survey which found that the services were facing increasing difficulties in attracting people to enlist.²²

Recognizing that economic inducements are not adequate to recruit a quality manpower force, Charles Moskos proposed the development of a two-year enlistment restricted to the combat arms, heavy labor jobs aboard ships, and other hard duty fields in return for what he describes as generous educational benefits.²³ Essentially this program would offer four years of college in exchange for two years in these hard duty jobs and would also incur a part-time reserve obligation following discharge from active duty service. Moskos states that "the conditions of Service would be honest and unambiguous, eliminating the 'post-entry disillusionment' syndrome." He is also confident

that the reserve commitment will help ease the serious manpower shortage facing the Reserves and National Guard.

Moskos indicates that this program would attract the middle class and upward mobile youth who have turned away from the military in recent years. With the growing trend of this particular population to take time off between high school and college, a diversion providing educational returns will be welcome. He also feels that the cost of this "new GI Bill" would be set off by thus reducing the current costs of high attrition and eliminating bonuses as those for combat arms.

Another problem that can be abated through this program is that of quality and education.

quality and education

The military services must be able to perform their mission fully and effectively. Traditionally, a high school diploma has been a standard of determining quality. The value of the diploma is not simply that it reflects what has been learned; it also shows perseverance in completing a goal and reflects some potential for accomplishment and growth.

With a smaller force, one hopes for an educational level that implies familiarity with the essentials of good citizenship and respect as well as some understanding of the society which the military member serves. Completion of a high school course suggests this kind of awareness. Furthermore, the day of the simple musket is long gone. With constantly increasing technological demands, the military services need personnel with the mental capacity to absorb various types of training on tanks, ships, aircraft, and other weapon systems as well as maintenance training for sophisticated mechanical equipment and automated management systems.

To justify the existence of these standards, many young people without diplomas were given high school equivalency credit through

examination. The high school General Educational Development (GED) test was originally designed for the armed forces for this purpose, even though its role has greatly expanded into society. However, the real value of the test concept came under question as it was believed that equivalency tests were being given to meet recruiting quotas rather than to identify qualified non-high school recruits. Thus, the services developed the Pre-Discharge Education Program (PREP) to provide classes for those requiring additional work to finish their high school education.²⁴

PREP, as part of the GI Bill, began for service personnel after they completed six months of service. No charge was placed against a person's entitlement.

The law required that one-half the participation in the full-time program (25 hours) be during duty hours unless the military mission would be negatively affected. The courses were operated by local high schools and colleges on the military bases. In 1975, 28,000 soldiers got their high school diplomas through PREP; and in 1976, at a time when the army had an enlisted force of only 50 percent high school graduates—at the same time they had a goal of 65 percent high school graduates—this vital program was being terminated.²⁵ Now only those enlisted personnel who participate in the payroll deduction plan can participate in the program. In addition, they can do this only during the final six months of their first enlistment, hardly a beneficial time for the services.²⁶ Completion of the PREP program results in a diploma, not an equivalency. This program, of course, suggests a sense of accomplishment, but those with PREP degrees have the same attrition rates as high school graduates; those with GED equivalents have similar attrition rates as non-high school graduates. This is an important consideration when attrition rates are at an all-time high.²⁷

Clearly, the incentives for those with high school diplomas to enter the service would diminish with the termination of the GI Bill, but to what extent, no one could truly predict.

The *Quality Soldier Study* also found that educational levels impact on the following factors and by so doing have further economic ramifications on services by their having to accept a less educated force:

- loss rate in training,
- loss rate in self-paced instruction,
- loss rate in accelerated promotion in training,
- higher disciplinary problems and loss rates in units,
- lower leader performance in units, and
- poorer job proficiency in units.²⁸

GI Bill and higher education

As it seemed apparent that armed forces personnel would be of reduced quality with the termination of the GI Bill, there was also a need to examine the economic strain on the defense budget and the educational institutions themselves.

With the termination of the GI Bill, more demand was placed on the already strained DOD Three-Quarters Tuition Assistance Program. During the early '70s, the Defense Department spent more than \$80 million a year for this program (including overhead). The army, the service most heavily dependent on civilian schools, provides DOD funding to its officers at the graduate level only if they have used up their GI Bill benefits. The latter is the more popular of the two programs as there is no payback and all tuition costs are paid. Without those benefits and with more emphasis on partial funding to meet the services' increased educational requirements, it is obvious that the DOD tuition assistance program quickly became overburdened due to the already limited funding. In FY 1974 alone there was a 15 percent in-

crease in enrollments for those using the GI Bill, despite force reductions at that time. The use of the GI Bill was at an all-time high in November 1974.²⁹

The American Association of Community and Junior Colleges recognized the unique problems of the mobile armed forces and the high level of training and education internal to the services and, in cooperation with the Defense Department, established the Servicemen's Opportunity College (SOC) in 1973. This program was designed to adapt a mobile military career pattern to a traditionally inflexible academic credit transfer and residency requirement system. This program met with great success and was extended to four-year schools through the American Association of State Colleges and Universities and thirteen national associations of higher education. By 1976, there were 159 community colleges and 176 four-year schools participating in the consortium.³⁰

These institutions, along with the colleges, universities, and 172 regional and national educational associations, expressed grave concern over the effect the termination of the GI Bill as an entitlement would have on the national goal of equal educational opportunities, recognizing that GI Bill benefits account for over 30 percent of all federal funds for student financial assistance. Also, in a period of spiraling costs for education, many institutions are facing more demand from their students for financial aid, or they are having to compete with paying students. Therefore, loss of these funds will have a harmful effect on the stability of higher education.

Fifteen percent of American college and university students were receiving veterans' benefits. In addition, schools receiving state funds usually are budgeted based on either the full-time equivalent (i.e., a student who enrolls in 15 semester units), individual headcount, or a combination of the two. Thus, any termination of the GI Bill could

gravely affect them. Since the full loss will not be realized until veterans no longer have funding from the GI Bill, it is difficult to anticipate the negative results. In fact, because of time limitation for using these benefits, there may even be an upsurge of GI Bill use in the near future.³¹

the GI Bill and the economy

At the present time, many students still eligible to use the GI Bill educational benefits are being driven in their choices for education by the great differences in tuition rates of colleges and universities. While some college students on the GI Bill can cover almost all their expenses, others are precluded from attending the more prestigious, independent, and private institutions because their benefit entitlement would cover only a small portion of the fees.³² This results in many students attending schools of lesser quality or their not being able to meet the gap between costs and income. For others choosing state community colleges, a better economic situation exists. Thus, states such as California are benefiting economically by receiving a much higher share of money, with as many as 53.9 percent of the state's veterans using the benefits. On the other hand, Massachusetts, with a great number of private institutions, has only 29.9 percent of the veterans using their benefits.³³

With a fairly equal distribution of people eligible for GI Bill benefits, some states are getting a disproportionate share of the funding. Of the \$5 billion spent in 1976 for scholarship benefits to veterans, \$3.6 billion went to individuals and institutions in the South and West. At the same time, unemployment rates in the Northeast and to a lesser degree in the Midwest have been above the national average while the Southern and Western states have begun to pull out ahead. This, of course, raises the question of whether the GI Bill is to provide

opportunities for the individual, the institution, or the state.³⁴

Finally, recent statistics indicate that for every dollar spent on the GI Bill, at least \$3 and as much as \$6 were returned to the government in the form of higher taxes paid by those with more education whose careers were greatly improved because of this education. A statement recognizing the impact of reduced tax revenues, entered into the *Congressional Record* on 19 February 1974, noted that "veterans using the GI Bill return to the federal treasury more than the nation invests in them to pay for the 36 months of college."³⁵ Of Vietnam veterans, who have experienced excessively high unemployment rates, 83.1 percent who have completed training with GI Bill benefits prior to June 1973 are employed in the same field as their training or are using their training beneficially.³⁶ This again confirms that there are economic benefits to using the bill.

IN SUMMARY, the GI Bill educational benefits have had far-reaching consequences that go beyond those directly serving in the armed forces by touching every aspect of today's society. It is predicted that in giving up these benefits, higher education and society itself are negatively affected. Already, at one end of the pipeline, the armed forces' recruiting effort is affected by the demise. There is no indication of the impact at the other end since veterans are still using their benefits and will continue to do so for some time. Finally, there is yet another underlying question as to how our democratic society can sustain a quality yet socioeconomically balanced All Volunteer Force while providing opportunities for upward mobility in society in return for serving one's country.

Washington, D.C.

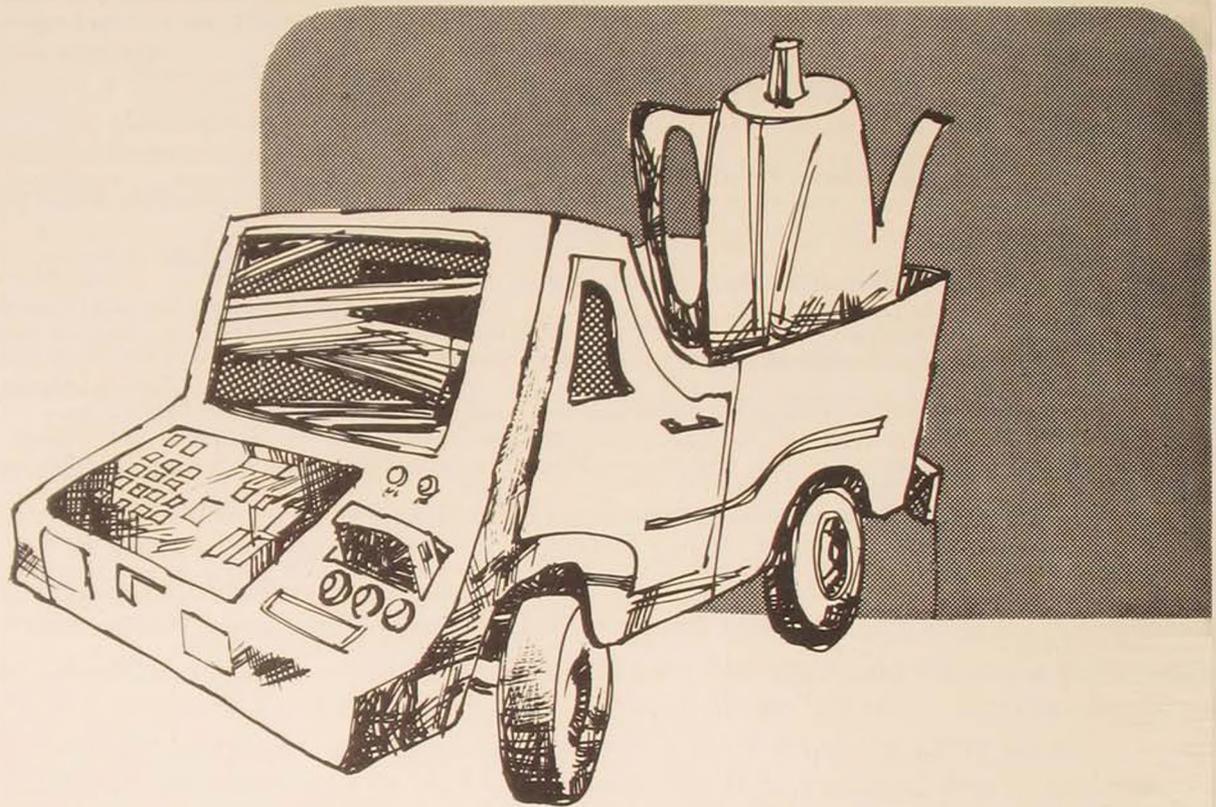
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1. Title 28, Chapter 34 of U.S. Code (Section 1651).
2. The passage of S1805 before Senate Committee on Veterans

- Affairs and HB9576 in the House brought forth Public Law 94-502, which changed the eligibility benefits after 31 December 1976.
3. Cecile Landrum, "The G.I. Bill Today," Defense Manpower Commission, Staff Studies, volume IV, May 1976, p. 2.
 4. Institute of Social Research, University of Michigan—1976 study on the GI Bill.
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 7. Charles Moskos, "The Enlisted Ranks in the All Volunteer Army," to be published in White Burkett Miller Center of Public Affairs, University of Virginia, *Military in American Society* study, Spring 1978, p. 55.
 8. *Ibid.*, p. 8.
 9. Taken from *Market Facts, Youth Attitude Tracking Study* (Chicago: Market Facts, 1977), p. 126.
 10. See House Vote HB9576, 1976.
 11. Employment and Earnings, Bureau of Labor Statistics, January 1976.
 12. Defense Manpower Commission: "The Keystone to National Security," April 1976.
 13. Employment and Earnings, Bureau of Labor Statistics, January 1976 and March 1978.
 14. "Defense Manpower Compensation Issues for FY 1977," Congressional Budget Office, Background Paper #6, April 2, 1976.
 15. Landrum, p. 4.
 16. Charles Moskos, "Military Compensation and the Military Institution," February 1978.
 17. *Quality Soldier Study*, TRADOC, Volunteer Army Division, May 14, 1975, Section 10.
 18. These surveys were covered extensively in articles by Andrew Dougherty and William L. Buesse, "Educational Incentives: The Critical Element to the Success of the All Volunteer Force," and H. H. Fisher, Jr., "Attitudes of Youth Toward Military Service."
 19. Institute of Social Research, University of Michigan—1976 study on the GI Bill.
 20. Dougherty and Buesse, "Educational Incentives: The Critical Element to the Success of the All Volunteer Force."
 21. Personnel Survey, conducted in-house by DOD, OASD/M&RA, 1973.
 22. Charles Moskos, "The Enlisted Man . . ." in reference to *Market Facts*, p. 12.
 23. This section is based on a discussion "A New GI Bill" from the article "The All Volunteer Force" by Charles Moskos, *The Wilson Quarterly*, Spring 1979.
 24. Public Law 91-219, March 26, 1970, established the PREP program. Public Law 92-540, October 24, 1972, authorized an outreach program to encourage enrollment into PREP and authorized release from duty time for at least 2½ hours required to complete the program.
 25. Department of the Army Statistics.
 26. Title 38, U.S. Code, chapter 32.
 27. The concern for the high attrition was the subject of a conference, "First Term Enlisted Attrition," April 4-7, 1977, sponsored by the Navy Manpower R&D Program of the Office of Naval Research.
 28. *Quality Soldier Study*, TRADOC, Volunteer Army Division, May 14, 1975, Section 10.
 29. DOD Statistics OASD/M&RA, Education.
 30. *Ibid.*
 31. By law, no entitlement may be used beyond ten years after the veteran returns to civilian life or the enactment date of the legislation, whichever comes last.
 32. The subject of inequity of benefits is addressed in bills HR2231 and HR8419 pending before the 95th Congress and discussed before the Subcommittee on Education and Training, Committee on Veterans Affairs, House of Representatives, September 15 and 16, 1977.
 33. *Ibid.*, p. 196.
 34. *Ibid.*, pp. 311-12.
 35. Testimony of Dr. John O. Edison, Vice Chancellor, University System of Georgia, for the United States Senate Subcommittee on Readjustment, Education and Employment of the Committee on Veterans Affairs, October 2, 1975.
 36. Veterans Administration, Completion Rate Study, June 1976.

We have made the military a community which is both integral to and estranged from the nation it serves. That dichotomy is tolerable only to the extent that it is seen as being *valued and appreciated*.

Under Secretary of
the Air Force Antonia
Handler Chayes, 1979



WHEN IS A COMPUTER LIKE A PICKUP TRUCK?

MAJOR FRANK J. DERFLER, JR.

THE TITLE question has picked up some answers. For example, a computer is like a pickup truck

- When it can be found at every level of the Air Force organization from flight line to chapel.
- When it can be used by persons with a minimum of training.
- When it costs less than \$5000.

- When it does generalized jobs like hauling and sorting and specific jobs like working on power and telephone systems.

- When maintenance can be done by a centralized pool, by local contract, or, on a limited basis, by the user.

- And when units from many different manufacturers are found around a base, each type chosen because of its availability or features.

Earlier in this journal I wrote that the micros are coming and would be with us soon.* I predicted that these micros (stand-alone microcomputers built around a single microprocessor chip) would be a common sight in Air Force offices within the next five years. At that, we would be lagging far behind private industry because of the vagaries of the military procurement process.

Like many who dare to guess the future, I erred on the side of conservatism. We are seeing a proliferation of microprocessor-controlled devices entering the inventory right now. I will leave discussion of the use and implications of microprocessors in weapon systems to those doing the work in that field.¹

What I will focus on is the neglected area, the computer with the attributes of a pickup truck that is proliferating into flight-line shops and headquarters offices.² Usually coming without much fanfare, sometimes almost in secrecy, and even sometimes paid for out of private pockets, this growing group of invisible computers often is unregulated by the typical automatic data processing (ADP), accounting, or communications experts in the Air Force.³ Should it be?

the cheap computer

According to authoritative sources, the Tandy Corporation (Radio Shack) sold over 100,000 of its TRS-80 consumer style microcomputers during 1978.⁴ If sales from all other companies equal this number, then there were about 200,000 microcomputers owned by private individuals in early 1979, and the number is continuing to grow by at least 10,000 a month. We can postulate that these individuals have some rather obvious traits. They are probably well educated, technically inclined, and relatively secure finan-

cially, and they may have some relationship with computers in their jobs.

Certainly, many present or future individual computer owners can be found in the military. These people know that while their small computer has a number of the attributes of an "adult toy" (average price about \$1000), it can also do many useful things around the house, such as keeping inventories, accounting, cross-referencing, indexing, and otherwise "handling" information (words) and data (numbers).

One day, when faced with perhaps a new and possibly dreary task at work ("Harry, the Old Man wants to know how much the Ops guys spent on TDY trips to Peoria over the last two years."), our uniformed computerist might turn to his machine at home for help. As Harry and others around him begin to see the value of applying some computer power to their primary or additional duties, more home machines may come to the office. As the personally owned machines prove their value, unit funds may be expended to "buy one like Harry's."

Through this and other similar scenarios, the consumer-style microcomputer will find a home in the USAF office or shop next to the hand calculators, typewriters, and automatic coffee makers there already. They will (and did) enter without review by the software compatibility, hardware reliability, and systems analysis boards and committees that claim responsibility for such things. These computers are arriving in response to a perceived need that can be met expeditiously and at a low cost.

What is wrong with that? Well, let's see.

What price programming?

Ten years ago, consultants who were pricing large-scale computer installations used this rule of thumb: 50 percent of the total price for hardware and 50 percent for software. That ratio has changed recently but not

* Captain Frank J. Derfler, Jr., USAF, "The Micros Are Coming," *Air University Review*, September-October 1977, pp. 30-35.

because the programming of big time-shared user systems has gotten cheaper. The ratio has changed because hardware, judged by capability, has been reduced to a small fraction of its total price while programming costs continue upward.⁵ The hardware is just jacks for openers in the computer game. Software now makes up about 80 percent of system development costs.⁶ Several Air Force agencies, therefore, pay a great deal of attention to the software used on big systems in a valiant effort to control this part of the price equation.⁷ Indeed, the search for a common Air Force-wide programming language seems close to its goal. But large multi-user programming has long been a black art shrouded in its own dogma, doctrine, and dialect. This art has been complex because it tries to be all things to many users and often falls miserably short in quality and almost always short in timing.⁸

The antithesis of big system programming is found in mini- and, particularly, in microcomputer systems. They try to be only one thing at a time to only one user at a time, so they usually succeed. Microcomputer programming is at the other end of the scale in cost and marketing, too. There are many, many systems, so programs are mass produced and distributed. Most sorting, merging, inventory, word processing, and book-keeping programs can be obtained for retail prices between \$7 and \$150 each.

"Software maintenance," a euphemism that means either "we didn't get it right the first time," or "the user changed his mind," is a heavy programming cost in large systems.⁹ The small systems are so unfettered by complicated program interrelationships that program maintenance (updates) can be done by almost any experienced user. Most of these small computers are programmed in a language called BASIC. BASIC was originally developed at Dartmouth College by Professors John G. Kemeny and Thomas Kurtz, who conceived of BASIC as a com-

puter language simple enough to be used by beginners yet powerful enough to carry out sophisticated computation. This year, about 25,000 U.S. students are learning BASIC in secondary schools.¹⁰ Eight-year-olds have written some very credible programs for microcomputers. The number of people who are able to tailor a prepackaged, low-cost, mass-produced computer program to their own needs is growing daily. Certainly, all of these programs will not be compatible among different brands or configurations of equipment, but neither are typewriter ribbons or truck tires.

A spin-off of this growing familiarity with programming will be an exorcising of the demons that now haunt large computer programming. The work is precise and tedious, but it should not be and will no longer be mystical.¹¹

Initially, the invisible computers coming to work for the Air Force should not result in any costly programming effort. In fact, some relief may be felt on the Worldwide Military Command and Control System (WWMC-CS) and base level systems as programs and customers move from hard-to-use, fussy, remote devices to desk-top personal computing service. Later, after the population has been established, consideration should be given to providing some standard programs unique to the Air Force, but this void may well fill itself, too. Just as certain in-house publications now list unique military programs for the popular programmable hand calculators (ask any field artillery type about "double-checking" trajectories with an SR-52), so will they soon list programs and even sources of prerecorded program cassettes for the military computer user.

But what if it breaks?

The subject of repairs introduces some good questions, but if we stick with our pickup truck analogy, these answers become less

frightening. Service is usually available from local dealers through a purchase order. Many kinds of office machines are already serviced in this manner. Because of the lack of redundant equipment, some backup or manual mode of operation should be maintained. Important data should not be stored away on a tape or disk where it cannot be retrieved if the system is down. This point argues for compatible systems so that the computer down the hall could be used when yours is not available. Compatibility, it should be noted, does not have to mean sole source or (shudder) military specifications. Compatibility simply means that any one of several similar devices will carry the load, just like pickup trucks. Compatibility simplifies maintenance without mandating strict uniformity.

The Broad View

Earlier, I asked some pointed questions about the need for regulation in the purchasing and introduction of microcomputer devices. These questions seem simplistic until you understand the scope of the problem. The computer like a pickup truck is only the tip of the iceberg. While many of us are still trying to convince our typists that "word processing centers" (read "typing pools") are good for them because such consolidation is the only way we can afford \$20,000 word processors, the price of microcomputer-based word processing devices has suddenly fallen to less than \$8000.¹² Typewriters with microprocessor augmentation are now available from at least two major manufacturers. Are these just typewriters or are they computers? Obviously, they are both and neither one. The General Services Administration has recognized this situation and has attempted to deal with it by classifying equipment according to how many lines of text it can display or how it uses a printer. These are operational definitions that are reasona-

bly easy to apply, but they beg the question, "Why bother?" Some of these systems have communications options that enable them to transmit pages of text any distance over existing telephone lines. Are they then telecommunications devices? Yes, but not exactly. We have communications computers and we have computers that communicate. We have typewriters that look like TV sets and computers in our coffee pots. Different people manage resources that are beginning to look more and more alike.¹³

I am tempted to advise allowing this raucous cacophony of digital midgets to continue until it reaches some equilibrium of its own accord. But, in the interest of good management practices, we have got to try to give some guidance to the computer identity crisis. The *Proceedings* of the U.S. Naval Institute has a section called "nobody asked me, but . . ." Borrowing an oar from our naval friends, I will stick it into the old bit stream. I would propose that the Air Force step out in front of the microprocessor revolution by issuing one simple directive: Any computer devices, aside from weapon systems and other than test equipment, that can talk to other computer devices must have one common Air Force-wide standard for transmission. This is not technically difficult. Some very good standards exist.¹⁴ We just have to choose one and stick with it. If we do this, we will have developed, de facto, a computer communications system with great redundancy and flexibility that would otherwise take millions to program and procure.

the management

Many will argue that the invisible computer (both stand-alone microcomputers and microprocessors imbedded in other devices) must be rigidly controlled. I would like to take a stand against this position, but I don't think I would be successful. The bureaucracy involved is seriously threatened by the

flow of information that such systems provide. Their opposition will be couched in terms of security and conservation of funds—and there is just enough truth there to show good color—but actually there is a strong perceived threat to the existing channels of communications and ways of doing things. Such resistance to change must always be expected, no matter how seemingly clear the value of the change is. So regulation has been mandated, and the mandate will be carried out.¹⁵ The only question is: By whom? Digitally speaking, who will control the number crunching, data handling devices? We have proved that they are mutations of old ideas with new capabilities, so where should limits lie?

The placement of the data processing function in commercial organizations seems to run on a wheel of life with a yin and yang of its own. Management of data processing began in the accounting or comptroller structure because they were usually the first corporate users of data systems in the form of electronic accounting machines. (Remember the phrase EAM cards?) The management function then moved out into the manufacturing and processing sections, which made use of automation in many areas. Control of computers was often decentralized. Now, driven by the high cost of software, control of data processing is seen wandering back into the financial fold again.

I suggest that this is the wrong place for it for two reasons: First, data processing is a service that is needed at every organizational level. The financial folks are certainly pervasive in scope, but they are not a service organization and do not think like one. They do not think in terms of users or “customers.” Rather, they are more of a watchdog or “auditor” mentality. This mental set is valuable and needed, but it is not compatible with a service function. Second, the upper levels of management in the controller/comptroller structure usually have a

financial rather than a technical background. The computer field is breaking new technical ground faster than any other area. These new technologies are often reaching the “hardware” stage within 12 months of development. This represents a deluge of high technology products that should be managed by persons with some technical background.¹⁶

It could be reasoned that the administrative types in the military control the paper that is frequently the product of a computing device, they know about things with keyboards, and they are a service agency, so perhaps they should be the managers of things that nearly think? They have an input, certainly, but no more than the security police who control vehicle traffic have an input into what kind of vehicles are procured. My position is that the standardization and review of “smart” typewriters, microcomputers, and all sorts of other devices with communications augmentation should be the job of the communicators on any base. They would not validate needs, but they would regulate compatibility in the same way that they ensure that intrabase radios programmed under the appropriate table of allowances can talk together. As Robert Angliss, executive vice-president of RCA Global Communications wrote recently, communicators are becoming “movers of information” instead of providers of circuits. Computers provide the means of moving this information. Their management is now an integral part of the job of communications.¹⁷

Communicators are, by mission, training, and experience, providers of high technology service. It is logical and natural to combine the management of communications with the management of other computerized services. An example is provided by the Commander in Chief Pacific Command (CINCPAC), which calls its J6 “Director, Communications and Data Processing.” ADCOM has a similar integrated function. The Air Staff

once combined communications and computers under the KR office symbol, but this connection was broken in a 1978 reorganization. The inclusion of several important computer programming and acquisition agencies under the Air Force Communications Command is wise recognition of the inevitability of the love affair between computers and communications. This was a match made not in heaven but in the high technology Silicon Valley in California. It is better that the offspring be born with the benefit of formal marriage.

THE use of small computers is expanding rapidly. They are a low-cost high-return investment useful in a variety of ways. Their growth will affect many existing and planned systems and capabilities. They are relatively simple in use and concept and do not need the management scrutiny given to the expensive hybrid systems they resemble. They are made of humble and sturdy stuff—like a pickup truck.

Maxwell AFB, Alabama

Notes

1. See the "Semiconductor Focus" feature in any issue of *Electronic Warfare Defense Electronics* magazine.
2. Portia Isaacson, "Personal Computing," *Datamation*, July 1978, p. 219.
3. "Personal Computers Undercut the Control of DP Departments," *Administrative Management*, May 1978, p. 71.
4. Wayne Green, "Publisher's Remarks," *Kilobaud*, November 1978, p. 6.
5. Wayne Green, "Publisher's Remarks," *Kilobaud*, October 1978, p. 7.
6. M. I. Bernstein, "Hardware Is Easy: It's Software That's Hard," *Datamation*, November 1978, p. 32.
7. See the "Data Systems Authorization Directory," AFP 300-16.
8. Dennis Streveler, "Designing by Committee Works—Sometimes," *Datamation*, March 1978, p. 117.
9. Sarah Rolph, "The Micro Momentum," *Datamation*, December 1978, p. 75.
10. Bernard Banet, "Computers and Early Learning," *Creative Computing*, September/October 1978, p. 90.
11. John Lehman, "How Software Projects Are Really Managed," *Datamation*, January 1979, p. 119; Howard Bromberg, "The Consequences of Minicomputers," *Datamation*, November 1978, p. 102.
12. For instance, the Memorite System I retails for \$7900.
13. Amy D. Wohl, "Communicating Word Processors," *Datamation*, March 1978, p. 102.
14. "First Steps and Caveats to Network Development," *Administrative Management*, December 1978, p. 33.

15. Air Force attention was focused on the management control of microprocessors as early as 1 August 1977. A Hq USAF KRAX letter of that date clearly spells out the applicability of the '300 series Air Force regulations to microprocessors and microcomputers.

16. Jerome Kanter, *The Computer and the Executive* (Prentice Hall Books, 1967). Chapters 4 and 6 make an avid case for the separation of the data processing and comptroller functions. More reasoned discussions are contained in *Computerized Management Information Systems* by Joseph F. Kelly (Macmillan Company, 1970), chapter 3, and in the article "DP's Role Is Changing" by C.W. Getz in *Datamation*, February 1978, p. 117.

17. Robert Angliss, "Movers of Information," *Communications News*, January 1979, p. 44

Author's note

Anyone interested in further reading on this subject should also see the following excellent articles.

1. John G. Posa, "Personal Computer Market Multiplies," *Electronics*, June 7, 1979, p. 87.
2. "Distributed Processing from Buzzword to Byword," a white paper to management prepared by International Data Corporation and published in *Fortune*, June 4, 1979, p. 23.
3. Stephen Kahne, Irving Lefkowitz, and Charles Rose, "Automatic Control by Distributed Intelligence," *Scientific American*, June 1979, p. 78.

in my opinion

DOING THINGS THE SAME OR DIFFERENTLY *an alternative approach to the study of conflict*

MAJOR JAMES M. SIMPSON



IN recent years there has been an increasing debate in the United States over military issues, particularly those concerned with various levels of conflict below that of an all-out nuclear exchange with the Soviet Union. These debates range from the grand strategic through the doctrinal and tactical levels, but each is concerned with the nature of future conflict, how it should be conducted, and the appropriate forces with which to deter or fight it. In addition, these matters are no longer the sole province of the military but are pursued in a dialogue among the military and other sectors of government, and often with those who are completely outside the formal organizational structure.

Thus it is not unusual to find books, articles, and papers from a number of diverse sources that reflect various levels of the debate and various institutional sources as well. It is also not unusual to find civilians who have attained a sufficient level of knowledge to raise substantive issues that challenge official professional military opinion. Many of these issues relate to the refinement of currently accepted ideas or the adaptation of current methods to new technology. We are familiar with these, and they are dealt with routinely within our organizational structures. But others pose a more fundamental challenge: Should we continue to do things the way we always have, or should we seek a different approach to traditional methods and concepts?

A new theory of conflict has recently been evolved that underlies some of these basic challenges to traditional thinking and, at the same time, offers an analytical basis from which to evaluate such initiatives. The "asymmetric fast transient" theory of conflict, developed by Colonel John Boyd, USAF (Ret),

is a valuable, alternative approach to thinking about conflict at any level and is well worth the consideration of both the professional military community and the civilian defense community.¹ However, the recency of the theory should not lead to the conclusion that it is a major departure from widely accepted conceptual factors such as the principles of war. Rather, it extends them, as a brief comparative assessment will show.

Standard analyses of conflicts often stress the principles of war. Several lists of varying length are available, each the evolutionary product of the military history of a given nation. Regardless of the specific items on the list, these are generally used as a checklist and recommended as an aid to planning and decision-making for the deployment and employment of forces. Students of war are given definitions and examples that stress successful application of the principles by the winner, mistakes incurred by the loser for having forgotten them, or the acceptance of risk by the winner in ignoring one or more principles but in a carefully considered way.

This sort of analysis is useful in developing systematic thinking about how to employ forces in war and indeed helps one to come to some general conclusions despite technological differences between eras of conflict. Thus Arbela, Leuctra, and Leuthen all have certain characteristics in common.

The conventional analysis has its limitations though. It tends to concentrate on the skill of the victor in the art of war in relatively compartmentalized terms as dictated by the defining parameters of each principle and usually uses only the scope of the single battle being studied.

The use of the principles in this way can be contrasted with a more unconventional approach to an analysis of conflict through Boyd's "fast transient" theory.² While not denying the truths apparent in using the principles of war, this approach integrates them into a more rigorous analytical frame-

work. It does this as a function of time and focuses attention specifically on the psychology of the enemy commander, rather than primarily on his forces. The basic precepts of the theory can be quite easily stated.

Colonel Boyd's "asymmetric fast transient" theory of conflict was based on his analysis of air-to-air maneuvering of fighters in combat during the Korean War. Its key assumption is that the nature of conflict is best described by sets of action-reaction exchanges between the two sides. In this sense it assumes an environment in which the sides are able to maneuver. Its central concept is to describe these exchanges in terms of a series of observation-orientation-decision-action cycles that are used by each side in the conflict situation. After one side initiates an action that requires a corresponding countermove, the opponent must complete a Boyd cycle in order to react. This cycle takes a finite amount of time to complete. The initiator gains no advantage so long as the responding party has that amount of time or more available to him. However, the results change if the initiator can create a situation in which he can begin actions at a faster rate than his opponent can react (the asymmetric aspect where one is said to be "cycling inside" the opponent in terms of the relative Boyd cycles). Those results will be first a psychological and then a physical degradation in the opponent's ability to react effectively if at all.

As stated, the theory assumes a fluid or maneuvering environment. Each set of cycles, action and reaction, is a set of maneuvers designed to gain and maintain the advantage. If the object of conflict were merely to place force against force and await the outcome of the shoving match, the concept would be useless at that level and only apply at a lower echelon of conflict, ranging from the tactical to that of individual combat, where sets of action-reaction cycles could operate.

Therefore, if one wishes to use the cycles to his advantage, he must be aware of where the vulnerabilities lie. We find that they are vulnerable in two general ways, perceptions (observation and orientation) and the time of execution (decision and action). If a participant in the conflict does not properly perceive the situation, then he cannot decide on an appropriate course of action no matter how fast his cycle time. Conversely, if he has a slow cycle time, the most accurate of perceptions will be useless, since before he reacts to the first initiative, another is on its way. Therefore, it appears that either side has two categories of weapons available to him. Deception can cloud the opponent's perceptions, and a relatively faster cycle time than the opponent's can overload and shatter his total system.

The key to controlling the outcome of conflict with the theory is to be able to gain and maintain the initiative. This capability enables one to control both the time (speed) and the nature of the images (perceptions) which can be sent to the opponent. The initiative can only be retained, however, by ensuring a Boyd cycle that is relatively better than the opponent's in the dimensions of accurate perceptions and rapid cycle time.

The theory, therefore, seeks to use relative asymmetries in cycle characteristics to gain the initiative. If an immediate advantage is not apparent, it must be created. Successive cycles using such devices as deception, feints, or superior mobility can be used to get inside the opponent's cycle, at which point one can begin to control the outcome.

HAVING discussed the Boyd theory, we can now return to the basic question that seems to underlie critiques of current tactical, doctrinal, and strategic concepts—whether to continue to do things the same way or differently. The answer, if you

accept the Boyd thesis as viable, is not to be found in the theory itself but through the theory as an analytical tool.

The theory offers a framework for analysis in that it proposes two essential points of focus: relative cycle time between the two opponents and the perceptual framework of each party. Both are equally important and both can serve as criteria to use in assessing current strategies. In addition, it does not negate the traditional principles of war but adds to them by forcing the analyst to integrate fully the psychological effects of the dimensions of time and the relationship of perceptions to reality into the pattern of events—either in looking at history or in attempting to delve into the probable course of future conflicts. By adding these factors, the Boyd theory begins to bridge the gap between the problems of how to employ forces and the logical question of what they should be employed against. It suggests that there are alternatives to attempting to overwhelm the enemy simply, directly, and physically and annihilate him.

For example, at the Battle of Arbela, Alexander the Great beat a larger force by not conforming to the expected battle plan of his opponent.³ He executed a series of maneuvers so quickly and so precisely focused on the classic center of gravity—the enemy commander's position—that he was able to cycle inside his opponent and force that commander from the field. This act demoralized the defending army, which then panicked and retreated. Most of the losses in the battle occurred during this phase rather than in the fight that preceded it. The enemy force was thus not overwhelmed physically through annihilation tactics but defeated psychologically when their commander decamped. Certainly, Alexander used the principles of surprise, mass, economy of force, and maneuver. The Boyd theory integrates these principles into an overall pattern of timing and psychological effect,

which explains why the enemy commander departed the field while he still had a chance to win.

But the Boyd concept is not limited to the tactical course of the battle or of individual engagements within the overall tactical picture. The strategic decision to offer or accept combat at a certain time and place, or under given conditions, is itself part of another Boyd cycle that precedes the actual battle. And the concept can be carried a step further to consider that these strategic cycles are in turn a part of grand strategy, integrating political and economic factors with the military element. It, therefore, suggests that the development of a specific military force and its eventual employment against selected key objectives is the result of a series of observation-orientation-decision-action cycles, each operating at a different level but all focused on the psychological dislocation of the opponent as a prelude to his diminished physical capacity to act and his eventual defeat. If sufficient psychological dislocation can be achieved at either the grand strategic or strategic levels, it may obviate the need for actual combat at all.

This, then, is the essence of the Boyd theory. But it is difficult to bridge the gap between such a concept and its application to contemporary problems. This is particularly true with the Boyd thesis because it challenges some of the basic positions that the professional military has long maintained.

Perhaps most perplexing is that the Boyd approach supports a fundamental challenge to the traditional American approach to warfare, that is to overwhelm the opponent with the weight of superior firepower, materiel, and technology by destroying his forces through annihilation.⁴ The assumption in logic is that if we destroy his means of combat, we destroy his capability to fight. This logic is not disputed. One can analyze battles and the writings of Clausewitz and others to prove that such an approach is possible. It is

a philosophy that has succeeded in our own Civil War, World War II, and to some extent in Korea. Yet the expense of the approach and its failure in Vietnam should be sufficient to warrant reexamination.

The alternatives include those of the "indirect approach" as advocated by Liddell Hart, J. F. C. Fuller, and others.⁵ These statements have much in common with the Boyd theory in that they contend that the destruction of the enemy force is not necessarily the prime objective in warfare, nor the most effective. Instead, they suggest that the proper focus should be on the mind of the enemy commander. The assumption in logic is that if we incapacitate the controlling agency, the means remaining have no actual capability to continue combat.

One is always suspect in advancing a "clever" approach to strategy, tactics, or doctrine, yet the dialectic between the traditional and alternative approaches to combat appears to be the crux of the question of whether to continue to do things the same or to do them differently.⁶

A companion problem is that the military professional, as a product of his own environment, finds most of his essential truths about warfare in the wars, doctrines, and strategies with which he has had personal experience—World War II, Korea, or Vietnam. Even the experiences and thoughts of the great captains (Alexander, Hannibal, Napoleon) and of the great theorists (Clausewitz, Mahan) are interpreted through that same personal experience, with its distinctly American view of warfare. On the other hand, his civilian counterpart can read the same material and study the same battles but arrive at different conclusions simply because he has a different experiential base.

Thus, to the degree that we have institutionalized the traditional American approach in our strategies, doctrines, and tactics, we find that while we seek new ideas on one level, we are reluctant to develop them both

personally and organizationally on another.

The Boyd theory does challenge each of these factors, yet it does not advocate a complete change in current thinking. It does not dictate force structure, tactics, or doctrine directly. Instead, it provides criteria by which to evaluate what we do now and to set a direction for the future. This can best be understood by looking at some logical extensions of the basic theory.

The Boyd concept suggests several important insights. It suggests that force comparisons are less important than the state of mind of the enemy commander and that placing force against force is less important than using one's resources to get inside the opponent's Boyd cycle, thus achieving the objective of his psychological dislocation and defeat. It suggests that victory will go to the side which best understands and controls the tempo of the cycles, that is, those who can best place their perceptions in line with reality in the observation-orientation phases and who can best execute the decision-action phases.

This in turn suggests several subsidiary propositions. In a strict military sense, the military force structure must be organizationally and physically capable of executing successive Boyd cycles relatively more quickly than the opponent. In classical military history, at least through Napoleon, the organizational side consisted of the king/commander, a few close advisers, rudimentary intelligence, and highly personalized lines of command. The physical side consisted of superior discipline, training, and unit cohesion enabling units to be more effective at the point of contact in a battle than a like number of the opponent, or enabled them to be moved rapidly to a selected point of attack. Today the force equations are more complex. The commander may not be a single individual, he may not even be a military one or be present on the battlefield. Lines of command and communication are no longer

highly personalized, and they rely extensively on computers and other advanced technology. Organizational complexity has also increased manyfold, yet the same criteria of accurate perceptions and speed of execution should apply.

In this sense the concept suggests strongly that simple comparisons of equipment levels and of troops are not the key elements of a military analysis. Instead, questions such as the opponent's intent, his patterns of thinking, his vulnerabilities, and his relative cycle capability are more important. At the same time it suggests that we should analyze our own vulnerabilities in terms of the Boyd cycle and establish doctrines and tactics that are resistant to disruption under battlefield conditions.

In addition, more thought is necessary to place Boyd into a context that takes into account the precepts of such theorists as Clausewitz. For example, current command and control initiatives rely heavily on computerization and communication nets and place decision-making authority at high levels. What is the effect of the Clausewitzian "fog of war" on such a structure, and how would a Boyd analysis suggest we meet the problem?

All of these are difficult questions, and the difficulty is further compounded by the fact that the Boyd theory yields only temporary advantage, because the Boyd environment is totally interactive until one side or the other ceases to challenge for the initiative. Thus the great strength of the Boyd concept is also its greatest weakness. It is psychologically oriented in its focus and time-critical in its execution. Consequently, it is not subject to simple, quantifiable measures and, although it promises economical victory to the side that best uses it, the accompanying uncertainties encourage indecision and protracted debate, particularly at the strategic and grand strategic levels, both of which benefit the opponent's cycle time.

The Boyd theory has both new elements of challenge to traditional approaches to thinking about conflict and elements of continuity with such concepts as the principles of war. It may be both personally and professionally difficult to deal with for these reasons. Nevertheless, it offers a very useful analytical structure to those who seek to study conflict

situations, particularly warfare. It points us toward new understandings of success or failure in warfare, many of which complement rather than replace the traditional lessons we have derived from our experience. For that reason it deserves careful consideration and study.

United States Air Force Academy

Notes

1. Colonel John Boyd, *Patterns of Conflict*. Unpublished slide briefing given to the Air Command and Staff College, Air University, Maxwell AFB, Alabama, in 1979. The Boyd theory as presented in this article conveys the author's judgment as to the fundamental concepts in that presentation; the subsequent inferences are the author's own.
2. Although the Boyd concept should apply to all levels of conflict and to any degree of force employed in resolving that conflict, we are primarily concerned with its military application.
3. Sir Edward Creasy's classic *Fifteen Decisive Battles of the World* has an excellent account of the details of this battle.
4. See Russell F. Weigley, *The American Way of War* (New York:

Macmillan, 1973) for an excellent historical presentation of this thesis.

5. B. H. Liddell Hart, *Strategy*, second edition (New York: Praeger, 1967) and J. F. C. Fuller, *The Conduct of War* (New Brunswick, New Jersey: Rutgers University Press, 1961), pp. 242-43. Fuller comes to a conclusion about Arbela which is similar to the one the author arrived at through a Boyd analysis in "The Battle of Arbela: An Alternative Approach," an unpublished monograph in the Air University Library, Maxwell AFB, Alabama, which was briefly summarized earlier in this article.

6. See William S. Lind, "Some Doctrinal Questions for the United States Army," *Military Review*, March 1977, pp. 54-65, for an excellent critique which exemplifies this dialectic process.

Said he of the Russians, who can say;
When the night is gathering, all is gray;
But we trust that the gloom of the night shall die,
In the morning flush of a blood red sky.

Rudyard Kipling, "Ballad of the
King's Jest" (1890)

commentary

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

“The Emperor’s Close Air Support”

In our November-December 1979 issue, Group Captain Ian Madelin, RAF, argued that there are inherent limitations in the theory and practice of close air support (CAS), which make it a poor choice for the application of tactical air power in support of the land battle.

His analysis of close air support—defined as “air attacks, requested by the ground commander, against hostile targets which are in close proximity to friendly forces and which need the detailed integration of each air mission with the fire and movement of those forces”^{*}—pointed out a number of problems:

- CAS is essentially reactive in nature, making assignment of target priorities in line with the true priorities of the battle difficult.
- There will be inevitable delay between initiation of the CAS request and the arrival of aircraft in the target area.
- Targets in the battlefield area are generally small, hard, probably camouflaged, and quite likely to be moving. As a result, they will be difficult to see from the attacking aircraft, a difficulty further aggravated

by the need to fly low and fast to avoid enemy ground-based air defenses. Low air/ground weapon accuracy against single, hard, point targets will further reduce effectiveness.

- The usual solution to these problems, the use of a forward air controller (FAC), requires a cumbersome and probably unreliable communications network which will be vulnerable to jamming.
- The ground commander requesting CAS must terminate his organic supporting fires, at least for a time, to enable CAS aircraft to get safely in and out.
- CAS places friendly air assets in jeopardy to friendly ground-based anti-air systems.
- All of these effects are likely to be cumulative.

By contrast, committing our air assets against other battlefield targets in the enemy’s rear is not reactive in nature. Rather it permits proper assignment of target priorities:

- concentrates air assets on the targets against which they are most effective;

^{*}A paraphrase of definitions in TACM 2-1, ATP 33, and AAFCE Manual 802.

- simplifies target identification—everything is fair game beyond an easily established geographic limit;
- minimizes the effectiveness of the enemy's antiair defensive effort; and, finally,
- permits friendly aircraft to cross the front lines at places of our own choosing, thus allowing friendly ground-based antiair defenses a free hand to deal with enemy aircraft in the battle zone.

Group Captain Madelin's analysis was framed in terms of the cautionary children's tale, "The Emperor's New Clothes," by Hans Christian Andersen, in which the emperor is promised fine, new garments and pays handsomely for them. The deceitful tailors, unable to deliver the desired garments, convinced the unfortunate emperor that he is wearing the new clothes when in reality he is nude. None in the crowd admits that he cannot see the fine garments that, of course, do not exist. Only one little child cries out: "Why he has nothing at all on!"

The Editor

Comment by Major General John E. Ralph, USAF

I found Group Captain Madelin's analysis of close air support (CAS) well reasoned and internally consistent. The close air support/interdiction debate will probably go on forever as each proponent defines and redefines his assumptions and objectives. My thoughts on the subject can best be introduced by: Why must there be an a priori answer to the question of close air support versus interdiction? I think that Group Captain Madelin's article suffers the intellectual fallacy of the false alternative.

Let us start by presuming that "there is a war on." (p. 83) Let us continue and say that the war is a NATO-Warsaw Pact war in Central Europe. Is it too unreasonable to presume also that NATO may experience an enemy breakthrough? (p. 86) The author recognizes that there will be exceptions to the general rule that battlefield interdiction is preferable to CAS. (p. 86) If there is a breakthrough, I feel confident that both major ground and air commanders will be interested in doing everything they can to contain and, hopefully, defeat the breakthrough force. I expect that even Group Captain Madelin would agree that CAS is appropriate. Perhaps not, but I certainly believe it would be appropriate and demanded by the major ground commanders.

Thus, if there is only one breakthrough, I suppose the Group Captain's thesis is still intact because we still have CAS as an exception to the rule. But suppose there is more than one breakthrough? With the NATO-Warsaw Pact force balance that we all know only too well, how many breakthroughs are likely to occur? None, one, several, or many?

Suppose that close air support is provided to a local unit that has hitherto conducted a successful defense, but now the Soviet second echelon forces are closing on that unit. It seems to me that both air and ground commanders are going to be overwhelmed with targets and demands for attack resources. The real problem in the real war will be the real-time allocation and apportionment of resources to where the highest priority demand is. Some of those demands will be for CAS. We had better be able to respond to it and do it well.

AND, finally, a different thought. The pessimistic scenario that Group Captain Madelin develops is probably appropriate for the first day of such a war. The enemy will have all his fighters, warfare capability, and antiaircraft defenses, etc. But what about the second, third, or thirty-third day of the war?

I find it interesting that almost all debates about strategy and tactics presume the war will be fought in extenso the same way as on the first day. My guess is that one's view of the viability of CAS will be different on the tenth day of the war as compared to the first day.

Major General John E. Ralph (USMA; M.P.A., Princeton University) is Commandant, Industrial College of the Armed Forces.

"[The subject of close air support] can evoke more emotion (from soldiers and airmen alike) than most other subjects. . . . Your article is very well done and should be read by people in a number of air forces (and armies). . . ."

Rear Admiral Edward F. Welch, Jr., USN, is President of the Naval War College, Newport, Rhode Island.

Comment by Lieutenant Colonel Robert B. Savage, Jr., USMC

Should we tell the emperor that his magnificent clothes exist only in his own eyes, that the close air support (CAS) which he relies on will probably not be there when he wants it, that the aircraft will be of only marginal value if they do arrive? I suspect we should. But Group Captain Ian Madelin, RAF, has confused the issue with a flawed scenario and has been driven precisely to the wrong conclusions and recommendations.

the scenario

The battle scenario pits two fighter aircraft against a single moving, camouflaged enemy tank on a sophisticated battlefield bristling with electronic warfare and air defense weapon systems. The enemy has adopted a tactic of not massing his forces for an attack if he is in contact. Our side possesses such an inept air defense system that it destroys more friendly aircraft than enemy. Our ground commanders request close air support simply because it is "available,"

understand neither the characteristics of their supporting arms nor the principles of weapons employment, and are unable to prioritize the targets in their own sectors. Our fighter pilots arrive on the scene after a ninety-minute delay, during which time the sector commander has ceased all supporting arms fire. They then attempt to destroy the tank with the worst possible aircraft weapons—rockets. Waiting to be destroyed just beyond the battlefield is a vast array of uncamouflaged, lightly defended, and immobile targets—railheads, ammunition storage sites, headquarters, roads, bridges, etc. The author concludes that it is better to use air power to attack the rear area targets than the battlefield targets.

He concedes that there are a few situations that he views as atypical in which aircraft might properly be employed in a CAS role, namely in support of "particular ground units lacking their own combat support firepower" and in the case of an "enemy breakthrough in a weakly defended front." To support our disagreement with him, some background is needed.

Offensive combat principles. A commander planning offensive operations chooses the time and place of the attack. To ensure success he employs his forces so that he will have a greatly superior force compared to the defender (a ratio of from 3 to 1 to 6 to 1 is commonly sought). To do this, at some time he must concentrate (mass) his forces for the attack. Thus, by design, every offensive action consists of a situation in which the attacker possesses the strong force and the defender, the weak, *at the point of the attack*. We must assume from the scenario's large number of headquarters and support facilities and from the density of his air defense weapons, that the enemy is capable of mounting more than a one-tank assault. Thus, our fighters' targets in the scenario should be a battalion or regiment of tanks, not just one. When the enemy is conducting division-sized mechanized or armed attacks, our pilots' identification and location problems are greatly simplified. A commander who does not mass his forces for an attack is employing tactics unknown to our enemies (or to our friends).

Defensive combat principles. A commander planning a defensive operation must distribute his forces so that the attacker cannot achieve a sufficient force superiority to succeed in an attack. Unless the defender possesses an overwhelming superiority of troops and weapons, he cannot employ the forces he has along a very long front in static defense and expect to deter or defeat an attacker. His defensive strategy, then, must consist of mobile defensive units moved to counter any enemy concentration plus a means of concentrating his own firepower at the point of the attack. That is, weapons located at positions other than the point of attack must be brought to bear on the threatened areas. Given an adequate command and control system, all weapons in range can be directed to targets along the attack axis. Highly mobile weapons may be moved into range. The weapon with the most range and the highest degree of mobility is the aircraft. Hence it is relied on as a supporting arm in almost every conceivable situation in which the enemy elects to attack.

In the typical case, the defender will require immediate reinforcement in terms of both additional combat forces and fire support. Group Captain Madelin's question "If the FAC is in a position to fire smoke or a laser at a target and hit it, why does he . . . [not destroy it with his own weapons]?" misses the point. His advice to "in principle, rely on the Army's integral weapons for the contact battle" belabors the obvious. In fact, these integral weapons will normally be inadequate to the task if the enemy behaves rationally and in accordance with his own doctrine, i.e., if he attains massive force superiority at selected points before commencing the offensive.

As long as the West continues to field high technology, low manpower intensive forces, as politically and demographically it must, it will be necessary to provide fire support from every conceivable source, including aircraft. Seen in this regard, it is our battalions rather than our aircraft that must be regarded as the "precious" asset. In relative terms, we are stronger in aircraft than we are in tanks, artillery, and infantry.

Weapon selection. The author has ignored his

own advice in weapons selection and chosen an unsuitable weapon with which to attack the tank in his scenario. He makes much of the low kill probability of the aircraft rocket and lauds the ability of modern antitank weapons used by ground forces. A fairer evaluation might be to compare the rocket to 105-mm artillery. To give the ground commander the latest in missile technology and restrict the aircraft to World War II type weapons makes a very poor case against close air support.

In discussing capabilities and limitations of various fire support systems, three of the aircraft's most significant advantages are ignored—the ability to attack moving targets, the ability to attack targets the ground commander cannot see,* and the ability to deliver large tonnages of munitions. These factors are compelling reasons for CAS.

Fire support coordination. Two years ago, the U.S. Army and Air Force agreed to procedures that permit artillery fire to continue while waiting for the arrival of aircraft. Indeed, artillery is considered essential for the suppression of air defense weapons immediately prior to the air attack. Artillery fires are checked for only three minutes and then only those directed at the same target that the aircraft is attacking. The ninety-minute delay waiting for aircraft in the scenario is believable, but to stop all fire support during this time is unrealistic and contrary to U.S. doctrine.

My own experience with ground combat commanders has left me with a very high opinion of their ability to coordinate supporting arms fires. They have invariably been expert at weapons selection and usually knew more about aircraft capabilities and limitations than the aviators sent to advise them in this matter. They certainly employed their own supporting arms before calling for air, did a fair job of "prioritizing the targets in their own sector," and to my knowledge

*A forward air controller does not have to control every CAS mission; and, when he does, it is not necessary that he see the target. Consider the case of using aircraft against retreating forces or against counterattacking forces after a breakthrough.

never called for air support just because it was available.

the efficiency fallacy

By choosing an insignificant target and attacking it with the wrong aircraft weapon, and by attributing unrealistic tactics to the enemy and incompetence to the friendly commander, the author concludes that when CAS is requested "we have to accept that the chance of a successful outcome is slim, the loss rate could be high, the resources we have invested considerable, and the exchange rate exorbitant." Under those conditions, indeed we do. But if the war situation requires aircraft-delivered fire support in the battle area for success, then we must develop procedures, tactics, and forces to provide it. This may require a better air defense control system, better trained ground commanders, or new CAS command and control procedures. To demonstrate that it is easier or more efficient to do something else with available aircraft is to ignore the problem.

The efficiency fallacy which underlies the author's assertion quoted above has bedeviled combined operations throughout the history of warfare. Proponents of each new weapon system, be it the horse-mounted warrior, artillery, tanks, or aircraft, quickly develop rules and standards that govern the way in which the new weapon system is used. Thus, we aviators tend to measure our success in terms of efficient operation. We attempt to quantify the measure of our success by maximizing the havoc wreaked on the enemy (number of roads cut, bridge spans dropped, tanks killed, secondary explosions observed, etc.) and by minimizing our losses. In our calculations, the targets destroyed are not valued in terms of either time (of destruction) or position (in relation to the battle). Unfortunately, we have been unable to find an adversary who will agree to surrender when we achieve superior exchange ratios. If CAS is required to win, then arguments that interdiction is a more efficient utilization of aircraft are irrelevant. Efficient utilization of a weapon system is not a legitimate ultimate combat goal.

This is not to deny the utility of air attacks on

rear area targets. They are often as Group Captain Madelin argues, of greater value than close air support. Allocation of air assets to these two tasks is the job of the commander (not the air support operations center/ASOC) who must make the allocation decision on a daily basis. A commander confronted with the author's scenario certainly *should* direct his air component commander to go after the rear area targets. It is my contention, however, that the Madelin scenario represents the atypical case.

command and control

If the requirement for CAS developed earlier is valid, then Group Captain Madelin's indictment of the CAS command and control system as an "incredibly cumbersome set of procedures" that generate ninety-minute delays is a subject of great concern, both to those who may need CAS and those who will have to provide it. Here his criticism is exactly on target. The unresponsiveness of our command and control system is reason enough to tell the emperor that he has no clothes. Fortunately, these procedures are not part of the order of the universe and are based on no inherent physical characteristic of the CAS weapon system.

Defensive orientation. The orientation of both the providers and the users of our CAS system is predominantly defensive: "Air will pull you through when everything else fails." We have, perhaps subconsciously, supported this defensive orientation by devising a command and control system that fits it perfectly. It responds fairly well to a call for help; it is nearly incapable of providing flexible, phase-line by phase-line, objective by objective air support of offensive operations.

Note how the Madelin article assumes the defensive: ". . . our own troops, being in the defense, will have the benefit of better concealment. . . ." And, close air support would be appropriate in the case of ". . . an enemy breakthrough in a weakly defended front. . . ." (p. 86) As late as 1968, U.S. Marines in Vietnam used a CAS request precedence system based entirely on

the degree to which the requesting unit was being clobbered: Emergency precedence—unit being overrun, priority—unit will be overrun if CAS does not come, and routine—all other requests. The only way to request CAS for offensive operations was “routine,” which meant the mission would probably not be scheduled. Routine interdiction missions were seen as more productive.

As useful as CAS may be to save a unit, it is also essential that a method of integrating air power into the ground commander’s scheme of maneuver be developed. The same force superiority requirements for successful offensive operations apply to us as to potential adversaries. One method of concentrating force for offensive operations is through air power. For numerically inferior forces, as ours are likely to be, close air support may be the only way to achieve the force superiority required to conduct offensive operations. Offensive CAS has been neglected in the past largely because of the reluctance of air commanders to commit aircraft to a specific unit’s operation in advance. Group Captain Madelin expresses this situation accurately from the ground commander’s viewpoint: He “. . . cannot count on his request being granted.” Because the ground commander typically cannot get a specific commitment from air, he cannot plan his scheme of maneuver around air strikes as he can around other supporting arms fire. He can count on, perhaps, a preattack bombardment. But he must restrict his air planning to incidental targets which, if not engaged, will not dramatically affect the outcome of his offensive. Often his scheme of maneuver will be quite different from what he would choose if air support could reasonably be expected.

Assigning aircraft in direct support of a unit in advance of an operation would provide reasonable assurance not only that aircraft will be available, but that the aircrews will be aware of the tactical situation, that the aircraft will be loaded with proper weapons, and that the offensive schedule of operations can be modified without “losing” the aircraft to other missions when the ASOC diverts them in the name of efficiency. (Of

course, direct support aircraft, like artillery, can be reassigned by higher authority, but the decision to do so is a tactical one, driven by the battle situation, rather than an administrative one, designed to make the most efficient use of the aircraft.)

Examination of the literature available shows a noticeable lack of concern for CAS in offensive operations except for some significant work in connection with amphibious assaults and some old material on armored offensives. The use of CAS in the pursuit-by-fire phase of an offensive is rarely considered. Its potential here is very great as artillery has inherent limitations against moving targets, especially when they are beyond the forward observer’s view.

Delays and jamming. In the last decade, the introduction of vertical and/or short takeoff and landing (V/STOL) attack aircraft (attack helicopters, Harriers, and A-10s) has made it possible to eliminate many of the delays and even more of the command and control difficulties that are so vividly described in the Madelin scenario. With the aircraft physically located at operational field headquarters, the great difficulty in getting the tactical air request through to the aircraft operator in the face of enemy electronic warfare is partially overcome. If the aircraft are assigned in direct support, requesting air support is no more difficult than requesting artillery support. Requests can be transmitted by wire or even by runner, if they do not originate in the field headquarters itself. Likewise, the requirement for the extensive FAC briefing in the air disappears when the pilots are totally abreast of the tactical situation and receive their mission brief prior to takeoff.

Direct support tasking is still a suspect notion in aviation circles, and elimination of the old request channels back through the air component headquarters is strongly resisted. As a result, even with aircraft sited forward in training exercises, we still see the tactical air request wending its tortuous way a hundred miles to the rear and then back to the aircraft site. Pilots take off and streak about at three or four hundred knots for twenty

minutes of processing through the air command and control bean count system so that they may, at last, strike targets that are ten miles from the takeoff point. Major procedural and doctrinal changes may be necessary to ensure successful close air support on the modern battlefield. Forward basing, direct support tasking, and streamlining of the command and control procedures are all alternatives that must be considered before we give up on close air support as "too hard." Group Captain Madelin correctly maintains that the emperor is wearing invisible clothes. He proposes that we inform him of his nudity and convince him henceforth to remain naked because his clothes are needed elsewhere. The alternative of providing him with suitable clothing must be vigorously pursued.

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Comment by Major Patrick J. Finneran, Jr., USMC

In a hearing before a special subcommittee on close air support of the Committee on Armed Services, United States Senate, in 1971, Marine Corps Colonel George W. Smith summarized the essence of close air support (CAS). He said that close air support was only one of several capabilities to support the ground scheme of maneuver and that the ground commander's mission is "everything."¹ Implicit in his statement is the notion that the ground commander should choose the most efficient supporting arm available to him. If he is threatened by an enemy tank and can use a tube-launched, optically-tracked, wire-guided (TOW) or Dragon antitank weapon, he should use that instead of close air support. To do otherwise would be in violation of the principle of economy of force. This has been the main, underlying premise of close air support since its inception by the U.S. Marine Corps in the jungles of Nicaragua in 1928.

We are losing sight of the fundamental purpose

of CAS if we think it can, or should, replace any or all other supporting arms. Group Captain Ian Madelin, Royal Air Force, has posed a series of arguments, which I consider less than objective, for the abolition of CAS. Let's reevaluate what he said in light of the purpose of CAS as another means of combat support.

Although never specified in so many words, Group Captain Madelin's discussion was limited to CAS in the Western European (NATO) environment. In that limited context his argument has some validity; however, on a universal scope it is not accurate, nor does it consider technological advances that have enabled the CAS concept to adapt to changing circumstances.

In his scenario, Group Captain Madelin attacks CAS because of slow response, poor command and control, forward air control requirements, enemy electronic warfare, enemy defenses, and target identification. In his hypothetical situation, all these factors do apply, but before we examine each limiting factor in detail, let us look at the overall situation.

There are, in order, three levels of threat facing allied military forces: strategic nuclear, theater nuclear/conventional, and limited war. While our defense spending has generally reflected this priority, the probability of actual conflict has proved to be the reverse. International interdependence on energy and nonenergy minerals has increased the probability of limited conflict in the Third World. It is the potential for fast-moving conflict in this arena that will challenge the Free World in the 1980s and possibly beyond—evidence the Iranian crisis. This threat will require a mobile rapid response force that is light enough to be transported to the conflict area but heavy enough to win once it is there. The U.S. Marine Air Ground Task Force (MAGTF) with its organic aviation is an excellent example of the type of force required.

The MAGTF can be custom-tailored to the task and provided with the necessary mix of aircraft to provide that heavy combat power in the early stages of an amphibious operation or during other limited operations until additional means of

combat support could be moved to the area. In short, since no one can predict where, when, or what type of conflict we will be involved in, they cannot predict exactly what tactics or weapons will be needed to win. We must, therefore, retain those historic American traits of flexibility and innovativeness.

Group Captain Madelin has concluded that close air support was, "certainly not worth the money, and hardly suits the purpose for which [the emperor] is buying it."² His rationale was that close air support: (1) is not responsive to the needs of the ground force because of the cumbersome command and control system, (2) places too much demand on the forward air controller (FAC) and his communication capability, (3) places excessive demands on the pilot because of problems with target identification, and (4) requires assets that could be more efficiently used in an interdiction role. If his argument is universally applicable and not simply limited to the complex NATO environment, then we should agree with his conclusion. Conversely, if we can demonstrate that close air support is a viable concept in most, if not all, environments, then we should strive to improve our ability to use it.

The first failing that Group Captain Madelin addressed was response time due to the awkward command and control structure. In the NATO arena, this criticism is valid. It is not a new complaint, and a great deal of energy is being expended by all services, both American and allied, to find a better way. Among the alternative approaches being evaluated are the forward basing of V/STOL aircraft, more use of preplanned CAS, both scheduled and on call, and data link methods of transmitting air requests; but the most effective method has been increased training in the existing procedures. An example is the USMC combined arms exercises at Marine Corps Base, Twentynine Palms, California. These exercises enable small unit commanders, forward air controllers, ground controllers, and aircrews to exercise command and control procedures under realistic combat conditions, often with live ordnance. These maneuvers develop

familiarity with the system of command and control and provide an excellent opportunity to refine or modify procedures to meet the needs of more sophisticated combat environments.³

The notion of the forward air controller presented in "The Emperor" seems to be a combination ground FAC, airborne FAC, and fast FAC. All have the same task of terminal control, but they use distinct tactics which depend on the situation, mission, terrain, weather, etc. Since the ground FAC is the best known and—I would argue—most flexible, let's discuss his role in detail. In the Marine Corps, he is typically assigned to a frontline rifle company and is the air planner/adviser for that small unit commander. He initiates all air support requests, whether preplanned or immediate. In an immediate request the FAC is in direct contact with the direct air support center (DASC), which can assign a forward-based V/STOL aircraft to the mission, scramble a ground alert, or divert an aircraft already airborne on a lower priority mission. Once given the mission by the DASC, the aircraft reports to the FAC for terminal control.

This system gives the needed flexibility to meet the rapid response requirement of the ground unit. If air is not available, the FAC will know right away and will advise the commander who will have to take alternative action. Remember, the commander called for air because it was the most appropriate supporting arm or because no other supporting arm was available. If air is not available, he may have to change his scheme of maneuver.

The use of radio communication between the FAC and DASC or aircraft immediately raises the question of enemy electronic warfare, specifically communications jamming. Given that the enemy has the capability to jam all voice communications frequencies is a problem but not an insurmountable one. The FAC has a choice of three VHF radio nets to submit the request, and this redundancy reduces vulnerability to jamming. Once the request is received, the DASC can provide the bulk of the required information to the aircraft well behind the forward edge of the battle

area (or in the case of forward based V/STOL via land line or VHF radio net). This reduces vulnerability to jamming further and leaves minimal data for the FAC to pass to the aircraft. Currently, FAC-to-aircraft communication is a limiting factor since selective jamming can stop critical communication; however, new technology such as the improved RABFAC (radar beacon) can provide data to the aircraft on a frequency band presently immune from battlefield jamming techniques. The development of a battlefield, secure data link technology could eliminate this concern altogether.

To digress for a moment, Group Captain Madelin omitted a major criticism of CAS—in-effectiveness at night and in marginal weather conditions. Recent improvements in the AN/PPN 18 RABFAC beacon for A-6E and F-111 operations have increased the range of this equipment significantly, and new procedures are being evaluated for all-weather CAS operations under radio silence.⁴ Furthermore, the plan to modify the A-7 aircraft for RABFAC bombing will greatly expand this capability.

The problem of target identification illustrated in "The Emperor" is a real one, widely recognized within the "attack community." In addition to the RABFAC, which provides pinpoint bombing data for A-6 and F-111 aircraft, other devices are in various stages of development. They include laser target designators, the laser spot-tracking bombsight, laser-guided munitions, etc. These are not Buck Rogers ideas but represent existing technology and will greatly enhance the chances for a first-run hit. Additionally, the A-6E, F-111, and A-7, with their sophisticated navigation equipment, gained a good reputation for successful CAS during those nine "atypical" years of combat in Vietnam.

There are many points in "The Emperor" that most attack aviators will readily agree with. There is most definitely a need to develop and practice new CAS tactics for the NATO environment (this author doesn't know of a NATO-committed unit that is not concerned). But just because our clothes—or the emperor's—need a patch or two,

should we throw them away and suffer needless exposure? Close air support is a concept. It is a method of extending the range of supporting arms for ground troops; it can provide support for rapidly moving operations such as amphibious landings when no other means is available. The need for close air support still exists. It is a difficult mission that requires coordination, but with training it can be efficiently and effectively accomplished. The record of Marine Corps close air support in combat during World War II, Korea, and Vietnam will attest to its effectiveness.

Granted, there are numerous problems with CAS. There are, in fact, numerous problems in modern warfare. What do we do to counter sophisticated enemy air defenses? How should we best employ our air defenses? Where do we invest our scarce resources? These are typical of the problems that have plagued leaders for centuries.

Group Captain Madelin is right. We sometimes operate under delusions, but the viability of close air support is not one of them. Our ground commanders are going to need all the support we can provide, and close air support is one more means of applying combat power where and when needed. If a ground commander calls an air strike on a tank when he could have killed the tank with a TOW, then he is not a very resourceful commander. The solution is continuous, realistic, live-fire combined forces training.

The key to future success in NATO or in conflict is cooperation, cooperation among services and among allies. We must develop common procedures and routinely train together so that as a cohesive force each service can apply its individual expertise as required by the mission. Our common goal of deterrence through preparedness and peace through combat readiness must be the linchpin of our unity.

Group Captain Madelin's challenge of the close air support concept is not without merit. We must constantly reevaluate our readiness, our tactics, and our equipment. Playing the "what if?" game is almost always worthwhile. We should welcome criticism since it will help us avoid complacency and eventually increase preparedness.

Notes

1. U.S., Congress, Senate, Armed Forces Committee, *Close Air Support Hearing*, 92d Cong., 1971, p. 303.
2. *Ibid.*, p. 86.
3. The U.S. Marine Corps Air Command and Control System is different from the Army-Air Force or NATO systems. The Marine Corps system is self-contained and designed for rapid deployment. It is a flexible system and can interface with the existing NATO NAGE by means of the MANTA buffer system. Additionally, the Marine Corps Air Command and Control System can interface with other U.S. service systems. In fact, the mutual support feature enhances overall capability.
4. Additional information is available from Headquarters Marine Corps (Code AWP).

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Comment by Major Lawrence G. Kelley, USMC

Group Captain Madelin has, in my opinion, dismissed close air support (CAS) without its due. His lucid and well-reasoned explication of the merits of interdiction and tactical strikes represents, I believe, the current British and NATO thinking on the subject. It presupposes, however, that the next battles will be fought in Central Europe or, if not, then in another high-threat area where Soviet-style forces will oppose our own. Despite the Soviets' provocations, the unprecedented scale of their "peacetime" forces, their recent incursion into Afghanistan, their penetration of the Third World, and the whole range of other issues involved in countering them, war in Europe is not likely. We certainly recognize that the defense concerns of the United Kingdom lie primarily in Europe. So do ours, but the United States is a global power, whereas the United Kingdom in large measure has ceased to be so, a development that I find regrettable. Since the U.S. must concern itself with more than the threat in Central Europe, we can hardly afford to virtually discard so valuable a tool as CAS. Even the Israelis in 1973 were only compelled to suspend it.

I recognize the Group Captain's caveat to the need for CAS, but I also believe it to be very much understated. The "atypical" situations,

which he mentions as ones in which CAS has played a central role, are more indicative of the likely combat situations in which the U.S. will be involved than is Central Europe. I do not mean to belittle the concentration of forces there. Without them the U.S.S.R. would certainly move to fill the power vacuum, and the political blackmail which the West could expect to pay would be enormous. The stakes there, though, are high for both sides. If we maintain our vigilance, modernize our weaponry, and display the requisite national will and unity, the situation will remain but a tense stalemate.

The same is not true of the Third World, as recent events demonstrate. We can and must expect that any opponent which we might face there will be equipped with the modern air defense weapons, probably of Soviet design, but the degree of such outfitting is another issue. Insurgency and national liberation movements being limited in resources, the probability of a low-to-medium threat environment is a much more likely prospect.

Without going into the issues of vital raw materials and the role of ideology in Soviet behavior, I suggest that for various reasons our confrontations with Ivan will take place elsewhere than on the North German Plain. Group Captain Madelin's statements regarding weapons suitability and particular targets have great validity, as long as one has the weapons to which he refers and the environment permits one to employ them. Precision-guided antitank munitions and other tanks are very effective weapons against Soviet armor, but tanks and Dragons are of little use in marshland or in the mountains. In another case, just ask the friendly, local infantry unit commander how willing he is to call in artillery within 100 meters of his own position. Neither of these situations need deter a qualified attack pilot. The primary problem in CAS, alluded to in the article, is that of unambiguously marking the target, a fact to which many exercises attest. The marking need not be done by an airborne FAC: white phosphorus rounds from any ground weapon do very nicely. Using burst

transmissions, a ground FAC can provide a reliable correction, even in the expectable jamming conditions. Further, we cannot afford to leave our infantry units without access to heavy weaponry when they need it. If he were an infantry unit commander cut off from resupply, without attached armor and on the fringe of artillery support, would he take consolation from the knowledge that the aircraft which could be paving the way back to his lines were out looking for truck convoys 100 kilometers away? Does not the principle of economy of force to which Group Captain Madelin implicitly refers apply to ground units as well? Air units alone will not win a campaign.

I must state that the danger to us in the cockpit may be great in delivering CAS, and the anti-air threat that we face may be awesome, but neither of these is the measure by which the need for CAS should be judged. Interdiction may be a far more cost-effective technique than CAS in a high-threat environment, but I would not write off the need for CAS, nor would I minimize its role. When CAS is required, nothing else may suffice. This is particularly true in the U.S. Marine Corps which, by comparison with the armies of NATO, is one of those units permanently "lacking their own combat support firepower." We in the attack community fill that role.

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Response

Some people have, predictably, read into my article a case to discontinue air support for the contact battle, or in their words: "to abolish close air support." Quite the contrary, I am arguing for more support of the land battle, not less. To some extent the misunderstanding rests, not in what General Ralph calls "a false alternative," but in another pitfall of logic called "the confused use of

terms." Even the manual of *Tactical Air Operations* reminds us that: "Interdiction . . . and battlefield interdiction . . . are closely related to . . . and may be inseparable from . . . close air support." With that kind of interrelationship it is hard to discuss one aspect of the subject without conveying implications for the others.

Perhaps we need some new definitions. For the present though, we must make do with the old ones, so I remind the reader that the article was specifically concerned with direct close air support (CAS) in the traditional sense, as defined in the TACM 2-1 and elsewhere.

Let us now briefly consider some of the points which have been raised.

- I did not presume an exclusively European battlefield though that, I agree, would fit. (But those readers who accuse me of being too narrow in this regard are themselves ignoring the conditions of, say, northern Norway or eastern Turkey, both of them vastly different from the Central Region.) I simply presupposed an enemy whose capabilities were on a par with our own. When generalizing about tactics, that is a reasonable assumption to make. Of course, circumstances will alter cases—or they should, provided we are flexible enough in our thinking to let them.

- It should not surprise us that several of the people who wrote in have been Marines. Surely though, we can all see that the textbook marine mission—the one for which they must always be prepared—is a special one. If that were not so, there would be no need for Marines (among whom I number some of my best friends, or have done up to now). But it would be wrong to use the marine mission as the basis for all our close air support requirements and vice versa.

- Many readers have conceded the inefficiencies of the traditional mode of CAS operations, but say we should have new procedures or new equipment to counter them. That is not the way. If new procedures could solve the problem, they would have done so long ago—and the same for equipment. True, there could be marginal im-

provements in that direction, but that is beside the point. It is wrong to devote our resources to honing up our weaknesses when they could be better employed in multiplying our strengths. Furthermore, it is wrong to presume that these inefficiencies are the result of failings, as if we were somehow falling down on the job. Many of them are simply inherent characteristics of this form of operation. We have no difficulty in seeing that a mortar has characteristics which set it apart from a howitzer. Yet we fail to see that a ground attack aircraft also has weapon characteristics that suit it well for some forms of operation, but not for others.

- This raises another important point, namely that we cannot have it both ways. We do not have enough aircraft for that. The more aircraft we devote to the front line, the less we have for the battlefield behind it. We need not confine our ideas here to “first echelons” or “second echelons.” That is another false alternative. The enemy forward divisions are not deployed in thin lines nor in layers. They have body and depth, muscles, sinews, and other vital organs. Furthermore, an enemy mechanized division requires 200 tons of petroleum, oil, and lubricants a day to fight and over 1000 tons of ammunition. Transportation for this alone fully occupies a quarter of the division’s vehicles; for the forward regiments, the figure goes up to a third. If the air force does not see to these targets, who will? Not the army: First, they are going to be too busy; and

second, they cannot do this job anyway. And if no one sees to it, the odds at the front line will gradually mount against us until we are overwhelmed. At this point, no amount of CAS will save the day. In answer to the question: “How many breakthroughs are likely to occur?” I respond with another: “What are we to do with our CAS aircraft while we are waiting for the breakthroughs?” The answer to the second may well decide the first.

In questioning our traditional ideas about close air support, it was not my purpose to suggest that such support could be dispensed with. I repeat, we need to give more air support to the land battle, not less. And we could do this, even within the level of our present resources, by employing these resources in different ways. Our ideas about CAS have barely advanced since the days when aircraft were seen as merely an extension of artillery. Today’s ground attack aircraft is very much more than this. To take but one example, the introduction of modern navigation/attack systems has almost revolutionized the potential of ground attack aircraft. We can now do things which were once infeasible. Yet this development seems to have passed virtually unnoticed and is still unexploited in our tactics. Our ideas about the nature of close air support are due for a thorough overhaul.

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THE first amendment to the Constitution of the United States provides, in part, that “Congress shall make no law . . . abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble. . . .” Despite the almost unquestioned acceptance of this principle within American society, there remains a great deal of misunderstanding as to its application to members of the military forces.

Much of this misunderstanding is voiced in highly publicized comments of senior military officials and prominent legal commentators. The recent experiences of Major General John K. Singlaub, USA (Ret), are a case in point. Recalled from his post in Korea after making critical comments concerning President Carter’s decision to withdraw United States ground forces from that country, General Singlaub has, with much fanfare and a great deal of publicity, made many references to the suppression of senior military officers’ tactical, strategic, and political opinions. From his perspective, free speech does not exist in the military.



FREE SPEECH, THE MILITARY, AND THE NATIONAL INTEREST

MAJOR FELIX F. MORAN

Likewise, freedom of expression by lower-ranking personnel is thought not to exist. Melvin Wulf of the American Civil Liberties Union has commented that free speech in the military is opposed by "those who enjoy the picturesque spit and polish of traditional military life, as well as its predictability, security and class structure. They recognize that those features of their life are threatened by unfamiliar political ideologies and cultural habits."¹

The truth, of course, lies somewhere along the spectrum represented by this attitude of misunderstanding on one end and absolute free speech on the other. The purpose of this article is to explore that truth, to examine the first amendment as it applies to members of the armed forces.

*the first amendment versus
the national interest*

Free speech, as guaranteed by the first amendment, does exist in the military. There are curbs placed on free expression, but they are not as restrictive as they appear on the surface, and they are not without counterparts in civilian life. There are, after all, few wholly free agents in our society. For example, a judge is not free to practice civil disobedience from the bench but must conform to the rulings of the Supreme Court; nor is an employee of a private company protected by law from dismissal for expressing opinions distasteful to management. The situation is much the same in the armed forces.

Freedom of speech, press, and assembly as secured by the Constitution does not mean that the right to speak or publish one's convictions may be practiced without responsibility or without consideration for other factors. Justice Oliver Wendell Holmes stated in *Schenck v. United States*: "The most stringent protection of free speech would not protect a man in falsely shouting fire in a theater, and causing a panic."² As concluded in the

Schenck opinion, the right to free speech is dependent on the circumstances surrounding its exercise. In considering these circumstances, the question becomes one of outcome. Again, Justice Holmes provided a guideline in the *Schenck* opinion: "the question in every case is whether the words are used in such circumstances and are of such nature as to create a clear and present danger that they will bring about the substantive evils that Congress has a right to prevent."³

By 1950, the clear and present danger test was well established. In that year, however, a new requirement was forecast by the dissenting opinion of Justice William O. Douglas in *Dennis v. United States*.⁴ He argued that for speech to be punishable some immediate injury to society must be likely. This requirement was adopted outright nineteen years later in *Brandenburg v. Ohio*. The Supreme Court observed that statements must go beyond mere advocacy and be directed toward "inciting or producing imminent lawless action."⁵

In a military context, that standard forces us to ask whether or not free expression represents an imminent threat to the national interest. The national interest can take many forms, but for our purposes here it is generally synonymous with the ability of the armed forces to perform their wartime military mission. Senior officials, both military and civilian, agree that unlimited free speech is inconsistent with command, control, and military authority on which the armed forces are based and, therefore, must be restricted in some degree if the military is to maintain its capability for immediate and unified action.⁶ An army or navy whose members are allowed to spread internal dissension and disorder constitutes a hazard with perhaps as great a potential for danger to the country as a hostile foreign power.⁷ Thus, as an early legal commentator on military free speech states, "The national defense brooks no opposition and overrides many freedoms . . .

even in peace time the military must act as if war were imminent, for new habits cannot be established on the day the balloon goes up. . . ."⁸ It is a true paradox that the soldier, under certain circumstances, must sacrifice some of the liberties that he is called on to protect.

*military application
of the first amendment*

This suggested relationship is a balancing between the free speech rights of the individual military man on one side and the national interest on the other. As suggested by Justice Holmes, the balance is never even, nor is it always tipped in favor of one side only. The circumstances of the particular situation provide additional weight to one side, and the balance shifts in favor of the individual or the national interest.

Judge George W. Latimer, in a separate opinion in *United States v. Voorhees* observed: "Undoubtedly, we should not deny to servicemen any right that can be given reasonably. But, in measuring reasonableness, we should bear in mind that military units have one purpose justifying their existence: to prepare themselves for war and to wage it successfully. That purpose must never be overlooked. . . ."⁹

The unrestricted application of first amendment rights by servicemen could seriously jeopardize this single purpose by undermining discipline and morale. Judge Latimer succinctly noted in his *Voorhees* opinion, "A war cannot be won in the halls of debate, and conditions do not permit meeting lies with truth. . . . In times of peace, those who voluntarily or involuntarily work to protect our nation should not be required to toil in contention and strife engendered from within."¹⁰

It has been clearly established, beginning with the *Schenck* decision, that restraints which reasonably protect the national interest

do not violate the constitutional rights guaranteed in the first amendment. Within the armed forces, the restraints take the form of regulations that require review and clearance for release of information by military members and prior approval for the distribution or posting of written material on a military installation. They also prohibit personnel stationed overseas from participating in demonstrations.¹¹

Enforcement of these regulations, policy restraints, and traditional restrictions affecting discipline is accomplished through seven articles of the Uniform Code of Military Justice (UCMJ).¹² Specific articles prohibit:

1. Commissioned officers from using contemptuous words against the President and other senior civilian government officials.
2. Any person from behaving with disrespect toward a superior commissioned officer.
3. Insubordinate conduct (speech) toward a warrant officer, noncommissioned officer or petty officer.
4. Willful disobedience of an order or regulation.
5. Persons from making provoking or reproachful speeches or gestures towards other persons subject to the UCMJ.
6. Conduct unbecoming an officer.
7. Conduct prejudicial to the good order and discipline of the armed forces, or that will bring discredit upon the service.

Within the framework of regulations and the UCMJ, the basic elements of the limitations imposed depend on the time, place, and circumstances associated with the particular expression made by the military member.¹³ The final authority in determining whether the application of these limitations denies the serviceman his basic constitutional rights rests with the United States Court of Military

Appeals (USCMA) and, collaterally, the Supreme Court of the United States.

freedom of speech

A significant and much publicized military first amendment case of recent times was *United States v. Howe*.¹⁴ Howe, a second lieutenant stationed at Fort Bliss, Texas, was convicted of using contemptuous words against the President and conduct unbecoming an officer and gentleman, in violation of articles 88 and 133, Uniform Code of Military Justice. Specifically, he had participated in a demonstration in downtown El Paso and was observed by military police while carrying a sign reading: "Let's have more than a choice between petty ignorant fascists in 1968," and, on the reverse side, "End Johnson's fascist aggression in Vietnam." Lieutenant Howe appealed his conviction to the Court of Military Appeals, arguing, in part, that the charges against him violated his first amendment rights.

In affirming the conviction, the military high court answered the first amendment question by relying on the principle of civilian control over the military. Traditionally, members of the armed forces, particularly officers, have been restricted from using contemptuous words against or otherwise maligning the policies of the civilian leadership. Beginning with the adoption of the first Articles of War in 1775, Congress and other civilian leaders have sanctioned this restriction in order to prevent the possibility of a military coup. In applying this principle to the Howe case, the court stated:

True, petitioner is a reserve officer, rather than a professional officer, but during the time he serves on active duty, he is, and must be, controlled by the provisions of military law. In this instance, military restrictions fall upon a reluctant "summer soldier"; but in another time, and differing circumstances, the ancient and wise provisions insuring civilian control of the military will restrict the "man on the white horse."¹⁵

The rationale offered by the USCMA in its *Howe* decision traces the necessity of civilian supremacy over the military and the intent, from our earliest history, to use article 88 and its precursors to ensure that supremacy. Actual practice has not followed that intent, however. Past applications of article 88 have usually been confined to political activists, enemy sympathizers, and various types of malcontents. When civilian supremacy has actually been at stake, administrative actions, such as removal, reassignment, and forced retirement have been taken against the errant officer.¹⁶

A more recent military case that reached the Supreme Court, *Parker v. Levy*,¹⁷ has further defined the limits of military free speech. Dr. Levy was convicted for making disloyal and disrespectful comments to enlisted personnel intended to promote disaffection among the troops, in violation of articles 133 and 134, and for failure to obey a lawful order, in violation of article 92.

Although the issue on appeal was the vagueness and overbreadth of articles 133 and 134, the Supreme Court's decision has considerable application to the issue of military free speech rights. The Court said that while members of the armed forces were not excluded from the protection of the first amendment, a different application was required because of the fundamental need for obedience and discipline. Stressing this uniqueness, the Court stated that civilian first amendment standards do not automatically apply to the military.¹⁸

In reaching its decision, the Court relied on the Court of Military Appeals to explain the unique need of the military. The latter court stated in *United States v. Priest*:

In the armed forces some restrictions exist for reasons that have no counterpart in the civilian community. Disrespectful and contemptuous speech, even advocacy of violent change, is tolerable in the civilian community, for it does not directly affect the capacity of the Government to discharge

its responsibilities unless it both is directed to inciting imminent lawless action and is likely to produce such action. . . . In military life, however, other considerations must be weighed. The armed forces depend on a command structure that at times must commit men to combat, not only hazarding their lives but ultimately involving the security of the Nation itself. Speech that is protected in the civil population may nonetheless undermine the effectiveness of response to command. If it does, it is constitutionally unprotected.¹⁹

This endorsement of the *Priest* decision clearly demonstrates the Supreme Court's application of the balancing test, weighing the peculiar needs of the armed forces as but one factor to determine the extent of military free speech rights.

freedom of the press

One of the earliest first amendment cases decided by the USCMA, *United States v. Voorhees*,²⁰ involved a lieutenant colonel who wrote an account of his war service in Korea. He submitted the manuscript for review, as required by military regulation, but refused to delete certain passages as requested by the reviewing authority. Ignoring an order to withdraw the manuscript, Lieutenant Colonel Voorhees went ahead with publication. He was convicted by court-martial of five violations of the UCMJ for publishing his work without proper clearance. A board of review reversed all the findings of guilty except one but upheld the sentence of dismissal and total forfeiture of all pay and allowances.

On appeal, the USCMA concluded that a regulation requiring security review was valid and, therefore, did not violate the military member's first amendment rights, noting that the right to free speech is not an indiscriminate right and is qualified by the requirements of reasonableness in relation to time, place, and circumstances. Although the court failed to address the issue of policy review, Judge Latimer, in a separate opinion, concluded that the first amendment does not

guarantee any expression that would jeopardize the efforts of the armed forces. He wrote:

A few dissident writers, occupying positions of importance in the military, could undermine the leadership of the armed forces, and if every member of the service was, during a time of conflict, or preparation therefor, permitted to ridicule, divide, deprecate, and destroy the character of those chosen to lead the armed forces, and the cause for which this country was fighting, then the war effort would most assuredly fail.²¹

Thus, the *Voorhees* decision clearly supports the military's authority to limit free speech with respect to both the security and policy interests of the armed forces.

The case, *United States v. Priest*,²² resulted from the publishing activities of a navy journalist convicted of two specifications of printing and distributing issues of a publication which contained statements disloyal to the United States, in violation of article 134. The paper encouraged desertion and gave the names of groups in Canada who would aid deserters. It made references to assassinating the President, taking over the government, and bombing the United States.

In affirming the conviction, the USCMA rejected the *Brandenburg* requirement that there be an incitement to imminent lawless action, holding that the clear and present danger test outlined by Justice Holmes in *Schenck* was the proper standard for determining the extent of free expression within the military services.²³ The court further stated:

The danger resulting from an eroding of military morale and discipline is too great to require that discipline must already have been impaired before prosecution for uttering statements can be sustained. As we have said before, the right to free speech in the armed services is not unlimited and must be brought into balance with the paramount consideration of providing an effective fighting force for the defense of our country.²⁴

A final notable publication case is that of the *Secretary of the Navy v. Avrech*.²⁵ Avrech, a Marine Corps private stationed in Vietnam,

was convicted of attempting to publish disloyal statements with the intent to promote disaffection among the troops, in violation of articles 80 and 134. He had not actually published or distributed the material since he was apprehended while carrying the typed stencil.

The case eventually reached the Supreme Court and was decided as a companion case to *Parker v. Levy*. The value of the *Avrech* decision is that it indicates that, while in a war zone, the balance is shifted almost exclusively in favor of the need to protect the national interest.

freedom of assembly

There have been two notable cases concerning the serviceman's right to assemble peaceably, as guaranteed by the first amendment. In the first, *Dash v. Commanding General*,²⁶ the commanding general of Fort Jackson, South Carolina, denied petitioners permission to distribute unofficial material on post and to conduct an open public meeting to discuss the war in Vietnam. The petitioners, twelve enlisted men, sought declaratory relief from the United States District Court in South Carolina, challenging the commander's authority to deny them the right to hold on-post meetings. The district court upheld the commander's power to deny such meetings, when it was reasonably determined that their purpose was to produce discontent, disorder, and dissension.

In another case, *Culver v. Secretary of the Air Force*,²⁷ the federal appeals court upheld the conviction of an Air Force captain for participating in a demonstration in a foreign country, as prohibited by AFR 35-15, in violation of articles 92 and 133. In reaching its decision, the court reasoned that the military must be given wide latitude for the prevention of political activities that might embarrass the host country. From this decision, it is clear that under certain circumstances

first amendment guarantees must yield to the interests of the government in maintaining cordial relations with the host country.

unique position of senior officers

The discussion of free speech to this point has centered on the balance between the national interest, as manifested in the morale and discipline of the armed forces, foreign policy and security considerations, and the individual military member's rights. Another frequently used justification for the suppression of first amendment freedoms, however, is the issue of civilian control of the Department of Defense. The ultimate purpose of civilian supremacy is, of course, to prevent the military take-over of the government, a possibility that seems quite remote in our time. A more likely goal for restricting the content of statements by military officials, particularly flag officers, is to prevent excessive influence of the military in the formulation of government policy.

In our democracy, formulation of policy is constitutionally vested in the civilian authorities of government. The professional military man merely executes policy in a nonpartisan manner. Prussian General Karl von Clausewitz explained this situation, stating: "The subordination of the political point of view to the military would be unreasonable, for policy has created war; policy is the intelligent faculty, war only the instrument, and not the reverse. The subordination of the military point of view is, therefore, the only thing which is possible."²⁸

Throughout our history some senior military officers have been unable to accept this concept and have challenged its traditions, but most have recognized the wisdom of civilian supremacy and reconciled any differences they may have had with their government. The Continental Congress insisted in 1774 on civilian control of the military. General Washington made it clear that

he would bow to the congressional will, even if he was personally opposed to its policy.²⁹ General U. S. Grant, while commanding federal troops during the Civil War, expressed his feelings on the subject by stating: "So long as I hold my present position, I do not believe I have the right to criticize the policy or orders of those above me, or give utterance to views of my own, except to the authorities in Washington."³⁰ General George C. Marshall, perhaps the greatest soldier-statesman in our history, recalling his differences with President Franklin D. Roosevelt, hastened to add, "But I didn't make any public speeches."³¹ General Marshall approved of General Douglas MacArthur's removal from command, saying that the situation of a local theater commander publicly voicing his displeasure and disagreement with the foreign policy of the nation was "wholly unprecedented."³²

This view is shared equally by the civilian leadership within the government. The Senate Armed Services Committee, in a report released in October 1962, concluded that "once the decision has been made by the properly constituted authorities the military man must support it. . . . If, in good conscience, he cannot live with a decision, he should divest himself of his uniform and carry on his fight in a civilian status."³³

Continuing this tradition, current guidelines have been clarified and reinforced by Secretary of the Army Clifford L. Alexander, Jr., in his address at West Point on 8 June 1977. Secretary Alexander outlined three distinct forums for opinion by the military professional:

1. Within the military: Opinions can be voiced freely within the chain of command. Once a final decision has been made, however, the soldier's responsibility is to work in a creative and dedicated manner to execute the decision.
2. Before Congress: A military man can

freely express personal opinion when asked. Once policy has been established, it is his duty to cite the policy and his intent to follow it. If asked, he can state an opinion at odds with the policy, so long as the opinion is so identified.

3. Dealing with the media: The officer must be aware that even before policy is established, expressing personal opinion may be contrary to the national interest. On the other hand, in some cases, discussion may be helpful in the formulation of policy. The official must be sure to state that policy has not been established or is subject to final review by military or civilian authority.³⁴

Secretary Alexander further noted that, "in almost no instance will the national interest be served by a military person voicing disagreement with established policy. . . . Attempts to achieve outside the chain of command what one could not achieve inside the chain of command are out of keeping with this tradition [of the President as Commander-in-Chief] and inconsistent with military professionalism."³⁵

It is important to note that the general officer is just as susceptible to prosecution as a result of his expressed thoughts as the enlisted man, even though a general officer has not been prosecuted since the court-martial of Billy Mitchell in 1925. As mentioned earlier, these errant officers are usually dealt with through the use of administrative sanctions such as removal from command, reassignment, or forced retirement. Nevertheless, as one writer comments, "The pyramid that starts with privates, seamen, and airmen bound to respect their noncommissioned officers culminates in generals and admirals bound to respect civilian secretaries and the President: These officials who bear the ultimate responsibility need protec-

tion from irresponsible abuse by their subordinates."³⁶ To demand less would destroy the framework of discipline necessary for the accomplishment of the military mission.

SERVICEMEN do, in fact, have the same first amendment rights as their civilian brothers. They are, however, not absolute. But, then, neither are these rights absolute in civilian law. The difference is that the military has

peculiar needs and interests apart from those of the civilian community it serves, and they preclude the exercise of the right of free speech on as broad a basis as is the practice in the civilian community. As Judge Latimer wrote almost twenty-five years ago: "No officer or man in the armed forces has a right, be it constitutional, statutory or otherwise, to publish any information [or make any statement] which will imperil his unit or its cause."³⁷

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Notes

1. Melvin L. Wulf, "Commentary: A Soldier's First Amendment Rights: The Act of Formally Granting and Practically Suppressing," *Wayne Law Review*, March-April 1972, p. 681.
2. 249 U.S. 47, 52 (1919).
3. *Ibid.*
4. 341 U.S. 494 (1951).
5. 395 U.S. 444, 447 (1969).
6. Homer E. Moyer, *Justice and the Military* (Washington, D.C.: Public Law Education Institution, 1972), p. 791.
7. Jerome X. Lewis, "Freedom of Speech—An Examination of the Civilian Test for Constitutionality and Its Applications to the Military," *Military Law Review*, July 1968, pp. 78-79.
8. Detlev F. Vagts, "Free Speech in the Armed Forces," *Columbia Law Review*, February 1957, p. 189.
9. 4 United States Court of Military Appeals 509, 16 Court-Martial Reports 83, 105 (1954).
10. *Ibid.*, p. 108.
11. Department of Defense Directives 5230.9, *Clearance of Department of Defense Public Information* (Washington: Department of Defense, 24 December 1966) and 1325.6, *Guidelines for Handling Dissident and Protest Activities among Members of the Armed Forces* (Washington: Department of Defense, 12 September 1969).
12. 10 United States Code, para 801-904 (1970). Articles 88, 89, 91, 92, 117, 133, and 134, respectively.
13. *United States v. Voorhees*, 16 Court-Martial Reports 83, 95 (1954).
14. 17 United States Court of Military Appeals 165, 37 Court-Martial Reports 429 (1967).
15. *Ibid.*, p. 175.
16. Moyer, p. 845, citing Kestor, "Soldiers Who Insult the President: An Uneasy Look at Article 88 of the Uniform Code of Military Justice," *Harvard Law Review*, vol. 81 (1968), pp. 1736-40.
17. 417 U.S. 733 (1974).
18. *Ibid.*, p. 760.
19. 21 United States Code of Military Appeals 564, 16 Court-Martial Reports 338, 343 (1972).
20. 4 United States Court of Military Appeals 509, 16 Court-Martial Reports 83 (1954).
21. *Ibid.*, p. 107.
22. 21 United States Code of Military Appeals 564, 45 Court-Martial Reports 338 (1972).
23. *Ibid.*, p. 344.
24. *Ibid.*
25. 418 U.S. 676 (1974).
26. 307 F. Supp. 849 (D.S.C. 1969).
27. 559 F. 2d 622 (D.C. Cir. 1977).
28. John W. Spanier, *The Truman-MacArthur Controversy and the Korean War* (Cambridge: Belknap Press of Harvard University, 1959), p. 3.
29. Alexander M. Haig, "The National Security Act and the Professional Soldier's Role in National Security Policy" (unpublished thesis, Georgetown University, Washington, D.C., 1962), p. 8.
30. Trumbull Higgins, *Korea and the Fall of MacArthur* (New York: Oxford University Press, 1960).
31. *Ibid.*, p. 124.
32. Spanier, p. 10.
33. George W. Brown, *Generals and the Public* (University of Kansas: Governmental Research Center, 1964), p. 10.
34. Headquarters Air Force Message 172355Z June 1977, Subject: Statements by Defense Officials.
35. *Ibid.*
36. Vagts, p. 188.
37. *United States v. Voorhees*, 16 Court-Martial Reports, p. 105.



THE INTELLIGENCE WAVE

DR. ALAN F. WILT

BOOKS on intelligence during World War II have long fascinated a variety of readers. But in 1974, interest reached new heights with the publication of F. W. Winterbotham's *The Ultra Secret*. Anthony Cave Brown's *Bodyguard of Lies* and William Stevenson's *A Man Called Intrepid* followed in quick succession and also moved onto the best seller list. Now less spectacular but more substantial works have begun to appear. In

the latter category are three important works written by David Kahn, Patrick Beesly, and General Vernon A. "Dick" Walters.

David Kahn, well-known for his earlier work, *The Codebreakers*, has once again made a major contribution to the intelligence field. This time he focuses on Hitler's intelligence network and how the Führer used it for military purposes.† The author begins with a brief history of intelligence and its place with-

†David Kahn, *Hitler's Spies: German Military Intelligence in World War II* (New York: Macmillan, 1978, \$19.95), 671 pages.

in the German military system before turning his attention to intelligence during the Third Reich, which he covers in the traditional manner of looking first at the collection of information and then at the evaluation processes. The latter portion of the book is an analysis from an intelligence standpoint of three important operations: the German invasion of Russia, the Allied assault against Northwest Africa, and the Normandy campaign. Kahn rounds off his study with some interesting conclusions as to why Nazi intelligence ultimately failed.

The book abounds with new information and insights. The layout of wartime Berlin, the organization of German Air Force intelligence, and other details add color and depth to the narrative. Not only does he include excellent thumbnail sketches of familiar German military leaders, such as Keitel, Halder, Guderian, Canaris, and Reinhard Gehlen (whose worth Kahn thinks is overestimated), he also discusses a number of less familiar figures. As a result, individuals such as interrogator Major Heinz Junge, cryptologist Lieutenant Fritz Neeb, and spies Fritz Kauders (code named Max) and Elyesa Bazna (Cicero) emerge as significant persons in their own right.

In spite of Kahn's wide-ranging knowledge of the subject, his insights are seldom overstated and should fascinate both the initiated and uninitiated in intelligence matters. For example, he examines in detail the many sources the Nazis used for gathering intelligence, from business and industrial contacts outside the Reich to the more traditional enemy interrogations and aerial reconnaissance (whose effectiveness deteriorated as the war went on) to the more sensational cracking of codes and spies on foreign soil. Yet, he never loses sight of the fact that even though intelligence often plays a vital role in military operations—especially during the twentieth century—it is not the dominant force. The irony of this maxim is that while some Ger-

man field commanders underestimated the possibilities of intelligence during the war, a number of writers in recent years have tended to overestimate its importance, thus making it seem at times as if intelligence actually won World War II.

In addition to the myriad of documentary and interview sources that Kahn utilizes, his discussion of the organization and functioning of Hitler's intelligence community will probably be the most valuable part of the book to historians. But the most enjoyable portions are those that deal with the efforts and methods employed by Nazi spies to gain information and Kahn's examination of the Barbarossa, Torch, and Overlord operations. He uses all of these instances to illustrate one of his major themes, namely, that German intelligence on the whole failed to give a clear picture of the enemy and his intentions.

Although one is reluctant to criticize a book of such magnitude, there are certain aspects of Kahn's account that one might legitimately question. This is especially true of his description of the three operations. For instance, his analysis of the 1941 offensive against the Soviet Union, which generally follows the work of historian Andreas Hillgruber, is sound enough, but he continues to accept the notion that Hitler's Balkan diversion that spring cost him the war, a point convincingly refuted by Martin van Crefeld some years ago. Kahn also argues that the Germans considered the Normandy invasion to be a diversion, which was to be followed by a second landing in the Pas de Calais area. While this is true, the Wehrmacht commanders did not conceive of the 6 June assault as merely a feint or diversion but rather as a major attack to be followed by another, equally strong attack later on. Nevertheless, it is difficult to disagree with Kahn's contention that Barbarossa represents Hitler's "greatest mistake," Torch his "biggest surprise," and Overlord his "ultimate failure," and that a

lack of accurate intelligence helped contribute to Germany's defeat.

One might also disagree with one or several of Kahn's five conclusions as to why Hitler's intelligence system failed (by contrast, he gives the Anglo-Americans relatively higher marks); but his reasons are well worth pondering, for they go beyond the mistakes attributed to the German military intelligence effort. One reason, according to Kahn, is the familiar notion of Germany's unjustified arrogance, which was the result of its gradual movement away from the Western humanistic tradition. The second reason he notes is that Hitler's offensive-mindedness led to a neglect of intelligence, for offensive thinking tends not to emphasize intelligence as much as a defensive orientation. Third, the German officer corps by training and temperament looked on intelligence as something unclean and as something one should honorably ignore rather than use as a means for achieving victory. Fourth, the Führer's method of exercising authority allowed for too much infighting among the various intelligence branches, and this led to a fragmented effort. Finally, Hitler's belief in Jewish and Slavic inferiority, communist weakness, and other misperceptions caused him, and the German people as well, to delude themselves about the world in which they lived. In the end, as Kahn states, "reality overwhelmed Hitler."

BEESLY'S book, *Very Special Intelligence*,[†] on British naval intelligence during the war, though less than half the length of Kahn's, is of no less importance. The title may be puzzling until one realizes that "very special intelligence" is what the British called their decrypted enemy signals.

Beesley is well qualified to write on the subject, for he served in the Admiralty's Operational Intelligence Centre throughout the conflict. While his emphasis is on the Atlantic and not the Mediterranean and Asian phases of the maritime war, this does not detract from the significance of the book. In fact, in terms of sources, interpretations, and factual content, it is a model in every way.

His use of sources is indeed exemplary, for they include his own recollections and those of his former colleagues in naval intelligence and at Bletchley Park, the main center for cryptanalysis northwest of London. These are supported by documentary materials from the Public Records Office (PRO). He also utilizes the American edition of records released in late 1977 by the PRO, which were not available when the British edition was published a year earlier.

Beesley is also very careful in his appraisal of the German side of the naval war. He bases his account on the work of historian Jürgen Rohwer, who knows more about the Battle of the Atlantic than anyone else, as well as key German naval personnel who are still living. (This contrasts with a criticism of Winterbotham's otherwise valuable work, *The Ultra Secret*, in which he uses the facts and figures compiled by British intelligence rather than the more accurate and readily available German records.)

Beesley approaches his information and sets forth his interpretations in a straightforward rather than a sensational manner; but they are interesting, nonetheless. He charts the course of British naval intelligence throughout the war and relates how the problems of the early years were eventually overcome (helped in part as more and more enemy ciphers were broken). He makes it clear that German wireless traffic was not the

[†]Patrick Beesley, *Very Special Intelligence* (New York: Doubleday, 1978, \$10.00), 282 pages.

only intelligence source used by the Royal Navy and that photoreconnaissance, direction-finding devices, agents' reports, and other sources also added to the picture of Axis shipping. And he describes the means for tracking the various enemy craft with which the Allies had to contend, including merchant raiders, battleships, heavy cruisers, and other surface vessels.

The most menacing feature of the naval war, of course, was the U-boat (which Churchill would not allow the dignity of being called a submarine) and the resulting Battle of the Atlantic. As Beesly points out, the U-boat war was taxing on the Germans as well as the Allies. Of 39,000 personnel in their submarine force during the war, 28,000 were killed. It was doubly difficult because both sides were reading the other's signals, a situation that the Allies eventually rectified, but one which the Germans, secure in the belief that their ciphers could not be broken, did nothing to correct. Even when the battle was won and Dönitz called off his wolf packs in late May 1943, this did not mean it might not reappear at another time and place. It is little wonder, then, that the Western Allies considered it to be the top priority for 1943, for only if the Atlantic were relatively secure could a cross-channel invasion be undertaken.

Beesly, like Kahn, has his array of impressive heroes, including Vice Admiral Sir Norman Denning, father of the Operational Intelligence Centre; Captain Rodger Winn, head of the tracking room, who anticipated the movement of Dönitz's U-boats with uncanny accuracy; and Captain Kenneth Knowles, Winn's American counterpart on the other side of the Atlantic. Just as important were the many individuals who served in the depths of the Admiralty and at Bletchley

Park, persons who were constantly overworked, periodically sick, and seldom recognized. One concludes that even with the appearance of parts of historian and wartime cryptologist F. H. Hinsley's official history, Beesly's work still stands as a pathbreaking effort.

A DIFFERENT type of book is General Walters's recollections of his 35-year military career, which spans the period from before America's entrance into the war in 1941 to his retirement as Deputy Director of the CIA in 1976.†

Walters has an interesting story to tell. His first assignment in the military was as a truck driver, but because of his linguistic ability, he was soon transferred to intelligence. He participated in the Torch operation and then served in the United States and the Mediterranean theater as a liaison officer with Portuguese and Brazilian soldiers (whose language at first he did not speak, but soon mastered). His flair for languages led military and political leaders to use him increasingly as an interpreter, and this, in turn, resulted in his coming into contact with many of the great and near-great figures during the postwar years. These contacts somewhat overshadow the other aspect of his career—his work as a military attaché, in which he was also quite competent. In fact, anyone aspiring to become an attaché would do well to follow Walters's example.

The author relates little about himself, but he obviously enjoyed his work and many of the individuals he was privileged to meet. He particularly liked, among others, Marshall, Eisenhower, Truman, Averell Harriman, and Castelo Branco, the President of Brazil from 1962 to 1967. He is also somewhat sym-

†Vernon A. Walters, *Silent Missions* (New York: Doubleday, 1978, \$12.95), 635 pages.

pathetic toward de Gaulle (especially for an American) and Mohammed Mossadegh, the Iranian nationalist leader in the early 1950s, in spite of Mossadegh's idiosyncracies. His view of ex-President Nixon is more ambivalent. He admired Nixon's courage during his 1958 Latin American trip as vice president but does not condone his conduct during the Watergate scandal, an affair in which Walters played a role because of his CIA position.

Although the book is interesting and has an anecdotal flavor, it is still marred by several defects. For one thing, while the catalogue of people whom Walters knew is amazing, he seldom gets beneath the surface in his descriptions of them. One gains some insights into Harriman, and the sketch of Henry Kissinger is well drawn. But what kind of person was Ike? What is Walters's assessment of General Gruenther? How would he characterize Giulio Andreotti, the important Italian leader? One wishes he had told us more about these individuals.

Second, the 630-page narrative should

have been edited more closely. The chapters on de Gaulle and relations with the Chinese are repetitive. The sections dealing with Vietnam and Watergate could have been effectively shortened. Moreover, at times the chronology is unclear and therefore not as easy to follow as it might be. Nevertheless, the positive features outweigh the negative ones. Walters's account possesses substantial merit and makes for enjoyable reading. It should be of interest to the soldier, diplomat, and general public alike.

OVERALL, comparison of these three works with the more sensational books on intelligence that appeared in the mid-1970s makes it obvious that these books by Kahn, Beesly, and Walters are more solidly researched, better written, and more significant contributions than their predecessors. Together, these works add a great deal to our understanding of World War II and the intelligence community as a whole. They represent a considerable achievement.

*Iowa State University
Ames, Iowa*

The United States Air Force Academy will host its Ninth Military History Symposium, 1-3 October 1980. The symposium, entitled "The American Military and the Far East," will examine the experience of the U.S. Armed Forces in East Asia and the Pacific since 1900. Program sessions include: (1) American Objectives and Strategy in the Far East, (2) American Pacification and Occupation in Asian Lands, (3) The Influence of the Orient on the American Military, and (4) The Impact of the American Military on Asian Societies.

For additional information about the symposium, write to Major Harry R. Borowski, Department of History, USAF Academy, CO 80840.

NAZI GERMANY: THE NEW AND NOT-SO-NEW LITERATURE

COLONEL JAMES B. AGNEW, USA (RET)

IT HAS been evident for several years now that World War II, in the fashion of an aging but appealing actor, is making a successful comeback. The lure of German and Japanese equipment and decorations at military collectors' gatherings and renewed emphasis by the media, as evident in "Holocaust," "MacArthur," and "A Bridge Too Far," have all tended to turn public attention once again to the events and leaders of three and a half decades ago. The publishing community is no less eager to tap that mother lode associated with the return to the high-water mark of the threat of global fascism. Almost every month another volume appears dealing with new information on World War II or an alleged "new treatment" of a time-honored subject of the period. Winterbotham's *The Ultra Secret* and A. C. Brown's *Bodyguard of Lies* are two of that genre, but they can now be considered obsolete as they have been followed by a literary deluge of others—some excellent, some atrocious. One of the recurringly binding topics, egregious but compelling, is Nazism, and the subject seems constantly nurtured by new publications. Whether in Germany or not, everybody seems to have views about it, the ability to find a publisher, and an eager public with an insatiable reading appetite.

Among volumes emerging about Hitler and his gang is a group of four, all by reputable authors and put out by good publishing houses. For the sum of \$57.90, the interested can acquire a mini-library on the subject of

National Socialism. It may not be the *best* library for the price, but it is illustrative of "What's New in Nazism."

AN acknowledged historian of the top rank in Great Britain, A. J. P. Taylor has written several classics on the evolution of modern Europe. Since the passing of Liddell Hart, Taylor, with David Chandler, must be regarded as a giant among living British historians. But despite twenty-one published books, including two in the prestigious Oxford series, he has ripped his knickers this time. *The War Lords*† is by all odds a pot-boiler and a poor one at that. In his preface Taylor is at least honest enough to confess:

This book contains the transcript of six lectures which I delivered on BBC television in August 1976. I gave the lectures . . . without script or illustrations, simply talking to camera and making things up as I went along. I have tidied up the text for publication, removing occasional muddles or false starts. Otherwise the lectures appear exactly as I delivered them.

Some observations are due regarding these remarks after one has perused the book. The most obvious is that once an author has a reputation for excellence, he can get away with publishing anything—for a while. Second, since these were TV-series lectures, then the British telly audience must be as unsophisticated as its American cousin. Third, the lack of notes and script has trapped other speakers far less accomplished than Taylor, but professional pride should have convinced

†A. J. P. Taylor, *The War Lords* (New York: Atheneum, 1978, \$10.00), 189 pages.

him to accept the TV fee and forget the book royalties.

Such a condemnation requires some specifics before it can be accepted. The book contains 189 pages. The type is large, and there are one or more illustrations on all but about 35 of the pages. There are no footnotes, no bibliography, and only a two-and-a-half page index. The book has six chapters, each dealing with the personality of a war lord or leader of either an Axis or Allied country. The final chapter, "War Lords Anonymous," deals with Japan, where, Taylor asserts, nobody (or conversely, everybody) was in charge. In his Roosevelt chapter, Taylor takes some unwarranted cheap shots at FDR, but since this piece deals with Hitler and his minions, let's examine what the author does in that chapter. He gives us 27 illustrations in 27 pages devoted to Der Führer. If one is interested in biographical information, he cannot find the dates of Hitler's birth or his accession to the chancellorship; if a political researcher, he will not read much about the Nazi movement or the party's manipulation of the populace, industry, or the German military. There is no account or explanation given for the German decision-making process except for some second-guessing of Hitler's motivations. There are entirely too many "I thinks" and "I supposes" for any scholar of that conflict to take Taylor seriously; as he states in his preface, "I . . . was making things up as I went along."

ANOTHER Britisher, however, has rescued his countrymen's reputation for good history. Richard Brett-Smith is a journalist and former soldier who has put together 306 pages of solid material that

should appeal to every devotee of German military history. His work, *Hitler's Generals*,[†] sets a good balance between nothing and too much. There is something in this for all readers. For the World War II neophyte, it is an excellent introduction to the German war machine that dominated Europe from 1937 until the Russian advance to the west and the Allied landings in June 1944. For the interested U.S. military officer, it is a neat series of case studies in leadership styles and techniques and the interplay of some strong personalities. (One thing German generals were not was "shrinking violets.") For the historian, Brett-Smith offers a new facet to the evolution of the World War II military, although not as comprehensive as other contemporary works on the leaders and the general staff. Finally, *Hitler's Generals* with its glossary, maps, and index is an excellent reference work for writers and researchers—sort of a "Who-Was-Who" in Nazi militarydom. With his journalistic experience, the author knows how to write for public consumption and can impart much information in a style that is entirely pleasing and factual.

One of his secrets is organization. Like a wily spice merchant, he has sold us ten little packages (chapters), when perhaps we wanted only one or two. While I was reasonably conversant with the organization and functioning of the German army hierarchy, Brett-Smith's chapter titles led me to reread those sections dealing with what I already knew—or thought I knew. His depth of research added facts that I had not encountered elsewhere. Thus, the chapters about which I confess to very little knowledge were a real bonus.

For example, "The Luftwaffe Generals," a chapter of 45 pages, focuses on that corpulent but intelligent *Reichsmarschall* Göring whose

[†]Richard Brett-Smith, *Hitler's Generals* (San Rafael, California: Presidio Press, 1976, \$12.95), 306 pages.

career, if not his life, is inextricably linked with the rise and fall of the first modern air force, the Luftwaffe. The German air arm saw its glory days in Poland and France but could not break Britain's back nor nurture Hitler's Wehrmacht squatting in the ice at the gates of Stalingrad. Brett-Smith aptly draws the portrait of Göring as a loyal, energetic leader who took on all comers to ensure that his service accrued all the distinction and slices of the budget to which it was entitled. This contrasts to the conventional Göring, the technically inept, whose concentration on the good life resulted in Germany's loss of lead in aerial supremacy by 1943. Göring's rise through the ranks of Nazism, to include battling "commies" and other opponents with his fists in the twenties, guaranteed him a respectable place in the hierarchy when power came Hitler's way. Despite the claims of some pundits that the Luftwaffe's failures in Russia and post-D-Day France cost him Hitler's blessing, the fact remains that only he and Himmler were summoned to the Führer's bedside in July 1944 after the futile assassination attempt. One of Göring's principal talents, characteristic of great men, was his ability to pick capable subordinates and fend off dangerous enemies.

The *Luftmarschall* was good at both. He stopped one of Himmler's more ambitious schemes, the creation of a separate *Schutzstaffel* (SS) Air Force responsive to himself. He did not trifle with other Führer favorites, Bormann, Raeder, Ribbentrop, or anyone else who got in the way. He may have been portrayed by Allied propagandists as a portly buffoon, but it was a foolhardy soul who joked openly about his appearance or mannerisms in wartime Germany. He picked a legion of capable commanders and staff officers: Erhard Milch, another World War I ace who cut his aviation teeth between the wars in the upper echelons of Lufthansa and who was one of the few German leaders

whose talents were so great that his parentage (a Jewish mother) was overlooked, Adolf Galland, Günther Ruedel, and Hugo Sperrle. Author Brett-Smith gives each far more than a thumbnail sketch.

Another interesting chapter ties in closely with volumes to be discussed later. A separate treatment is provided on that monument to the indignity of mankind, the Waffen SS. The writer provides all the reader needs to know about the inexplicable hold of Himmler on German power and his ability to create a state within a state. Few institutions in history have acquired a corner on terror as that of the Gestapo and the SS between 1934 and the end.

From the ranks of the SS rose such eminences as Paul Häusser, who at age 64 was the only one of Himmler's men commanding a full field army. Brett-Smith relates an interesting anecdote about Häusser: he was one of the few Nazis to purposely disobey Hitler's Russian no-retreat order and survive; he was transferred to exercise his talents in the invasion of Norway and promoted. Others include bully-boy "Sepp" Dietrich, another street fighter described by the lie-boss Goebbels as "the Blücher of the National Socialist movement"; Felix Steiner; "Butcher" Eicke (released from a mental asylum by Himmler); "Panzer" Meyer, and the rest of the first flight in Murderers' Row.

If one were to furnish a capsule opinion of *Hitler's Generals*, it is best described as a good overview of upper level German command during the war. A few like Kesselring, Manstein, and Göring get in-depth treatment; the others a bit less. There are eight fair maps and a photo or drawing of most of the subjects.

DOVETAILING neatly with the tome on high command is a new edition of Peter Hoffmann's excellent *The History of*

the German Resistance 1933-1945† first published in 1970. The new work, containing some fresh material by the author is undoubtedly the best treatment ever written of the nation-wide plot to stop the Führer before Germany was overrun by her enemies and plowed under as some of the more zealous Allied leaders had pledged to do. Hoffmann is not only a professional historian but an excellent storyteller as well. Mystery writer Rex Stout said that every author “. . . must keep you going. He must turn the pages for you.” Hoffmann more than satisfies this criterion. Despite his obligation to good scholarship, Hoffmann is also able to turn what could be takes the reader back to 1933, when the incipient shadows of resistance to Hitler and Nazism began to lengthen. Hoffmann then leads one through another decade of plotting and marshaling of an ever-growing ring of anti-Nazi antagonists in the military, civil bureaucracy, and academia, and this makes for slower reading; he takes perhaps too many pains to introduce his plotters (and they were legion) and how they acquired their negative attitudes toward the regime. One wonders how Hitler did as well as he did by 1941 with so many fervent enemies in his ranks, but the explanation lies, of course, in Himmler and his operatives, whose efforts to keep the lid on the assassinator population explosion were more than minimally successful. Interestingly, in the thirties when such things were possible, a number of notable German “antis” approached foreign leaders in France, Britain, and the United States for outside sanctions against Hitler, to diminish his internal support. The appeals fell on deaf ears.

At any rate, at about page 278 Hoffmann turns from research for its own sake to thriller writing and gives us a volume every

bit as suspenseful as *Psycho* or *The Lady in the Lake*. Without abandoning footnotes or other intellectual impedimenta, the author launches into a day-by-day and, later, hour-by-hour recapitulation of the plan to murder Hitler and his principal deputies and to seize the edges of the carpet leading to the seats of power. He tells the story so well that the American reader 35 years after the event cannot help identifying with the crippled Stauffenberg, ill-chosen with mangled hands to trigger the explosive device; Field Marshal Witzleben, selected by fate to return briefly and tragically to a stage on which he once strode with martial vigor; former Economics Minister Schacht, once the darling of the Nazi industrialists—in 1944 a prisoner awaiting execution by the regime he had given a decade to; and the others, virtually thousands. From the military, we watch the machinations of a number of senior and prestigious officers as well as lieutenants and captains, captured by the rhetoric and promises of their superiors. Rommel, Kluge, Fellgiebel, Stülpnagel, and Halder—many characterized also in *Hitler's Generals*—are among the plotters.

One waits for the blow to fall and, though informed to the contrary, wishfully hopes that Stauffenberg and company will be successful. They are not. And what is the most evident reason for failure? Clausewitz's compelling admonition about friction in war, that no matter how long and thoroughly one plans an event, he must be prepared for the unexpected. In this case, as Stauffenberg prepares his bomb, a German NCO hovers nearby compelling him to rush and to decide to use only half of the explosive charge in his possession. More thorough preparation, experts claim, would assuredly have resulted in Hitler's death and success of the subsequent

†Peter Hoffmann, *The History of the German Resistance 1933-1945* (Cambridge: Massachusetts Institute of Technology Press, 1977, \$19.95), 847 pages.

coup, code-named Valkyrie.

Hoffmann has omitted nothing, answers all the questions, and discusses the what-ifs. It is long, it is slow at first, but it is top-notch treatment of the subject matter. If one were to build a library containing only twenty volumes on World War II, *The History of the German Resistance* should be in the set.

ANOTHER good European historian, Robert E. Herzstein, has written a fine volume on a different dimension of the National Socialist movement.† Herzstein analyzes the party and wartime Germany by examining the propaganda machine. He gives us a trilogy within one cover: a biographical treatment of the Prince of Tales, Dr. Joseph Goebbels; the role of propaganda to inspire the masses of Germany to greater efforts; and, finally, an abbreviated history of the Nazi party. The book will probably be around for a while, for it delves deeply into the Nazi (read Goebbels's) style at adapting the media, particularly the motion picture, to subjective purposes. It should appeal not only to World War II buffs but also to devotees of old movies.

The author characterizes Goebbels as something of a naïve Heidelberg-educated, self-styled intellectual in the midst of a group of bums, ex-soldiers, and criminals, who constituted the party leadership in the thirties. Far more capable mentally than most of his co-ministers, Goebbels still had to acquire the tools of the mass-propaganda business from Hitler although Goebbels himself had the basics. He was a born hater who could rant by the hour against Jews and hard drinkers but divided his own time between work and skirt-chasing, a pastime that drew

down on him the criticism of his more "up-standing" associates, Himmler and Göring.

Goebbels made enemies as well as broadcasts and motion pictures. He was never able to get his foot into Hitler's door because the Führer kept his own press secretary out of the clutches of the little propaganda minister. Martin Bormann also kept Goebbels at arm's length, and it was not till near the end that the minister realized that Bormann was not just the office flunky.

Herzstein implies that the German internal indoctrination effort was overkill and that the *herren* in the street wanted to hear more about Stalingrad and less about Jew-baiting. The author provides anecdotes to show that to the wartime German civilian, Goebbels's portrayal of everything as deadly serious was not entirely true. A sample of gallows humor making the rounds of the beer halls and even the Propaganda Ministry about 1943 shows Germany twenty years after the war. Goebbels is peddling newspapers on the street; across from him Göring is doing a brisk trade in selling used medals. A stranger walks up and inquires into the nature of their business. They respond and ask his name. He replies: "Don't you recognize me? I'm Lord Hess."

And so it went until the end in April 1945. Hitler and Goebbels trying to shore up their eroding sandcastle with balsa-wood props, perhaps the only two of the gang who saw delusion as reality even in the last hours. The war they won was won at least a decade earlier.

THE IMPRESSION left by these Germany-oriented books is that of a nightmare returned. Nazism was for real, and its demise was just thirty-five years ago. Most members of today's Air Force were not yet born when the German generals stalked with impunity

†Robert E. Herzstein, *The War That Hitler Won: The Most Infamous Propaganda Campaign in History* (New York: Putnam's Sons, 1977, \$15.00), 491 pages.

across Europe, or Goebbels was screaming anti-Balkan tirades at "standing-room-only" rallies, or Hitler was guillotining and garroting his own citizens for treason after a con-

trived trial of thirty-minutes duration. These books not only provide a historical record of Nazidom, they also stand as testimonial to total war.

Falls Church, Virginia

MOSTLY OLD WINE IN OLD BOTTLES

some recent aircraft books

KENNETH P. WERRELL

THE FIELD of aviation literature is not only vast but growing at an amazing rate. Proof can be found in the publishers' announcements, booksellers' shelves, and the public's purchases. The great interest in aviation literature is generated by such factors as the colorful figures involved in aviation, the importance of aviation both in the past and the present, and the glamor, drama, and daring of aviation feats. Aviation is not only greatly involved with personalities and human drama; it is at the same time highly technical. Modern man, especially Americans, never ceases to be fascinated by gadgets, and the technology that permits man to break his earthbound existence is one of the most highly developed technologies around. Little wonder, then, that one of the more popular areas of aviation literature centers on the machines themselves.

For forty years the standard aircraft book was the weighty and authoritative *Jane's All the World's Aircraft*, published yearly with basic data on current aircraft. Then, in 1958, William Green's *Famous Fighters of the Second World War* appeared and broke new ground.

It contained not only the three views, performance figures, and photographs, as did *Jane's*, but many more photographs, more detailed technical and operational material, and, in addition, line drawings. Deserving, it was well received. Green followed with a second fighter volume; two volumes on World War II bombers; a ten-volume series, *Warplanes of the Second World War*; and then, in 1970, the exhaustive, *Warplanes of the Third Reich*. These works mark Green as not only a pioneer in the field but also as one of the best writers at describing aircraft.

Green's success has also encouraged others. Books—large numbers of books—on the aircraft of a nation, a war, or a type have followed, even a number of books devoted to one aircraft. It would seem, then, that there is little need for more books on aircraft. The continued publication of such books may be more a testimonial to popularity and profits than to need.

Of the newer aircraft books under consideration here, the one of broadest scope is the *Encyclopedia of Aircraft* edited by Michael and John Taylor.† Its purpose is "to tell the

†Michael J. H. Taylor and John W. R. Taylor, editors, *Encyclopedia of Aircraft* (New York: G. P. Putnam's Sons, 1978, \$20.00), 228 pages.

story of powered, manned flight," and the editors selected 244 aircraft, on the basis of technological or historical importance, from all countries, of all types (civilian and military), from the beginning to the present. A short, but adequate, prose entry is included for each, but more impressive are the graphics. The ample format (9-by-11³/₄ inches) permits large photos or drawings for each entry, about half of them in color. In addition, there are cutaway drawings of four aircraft as well as limited technical data on all of them. Clearly this book is not intended for the student of aviation; rather, it is for the coffee table. Its strong points are its graphics and scope, the latter making it worthy of the name encyclopedia. (One distressing note is that the binding of the review copy was faulty.)

Another book of broad scope is Bill Gunston's *Fighters 1914-1945*,[†] aptly described by its title. It is well illustrated and appears to be aimed somewhere between the layman and specialist; although the book lacks footnotes and lists only seven titles in the bibliography, it does put the development of fighter aircraft and related technology into a well-written, coherent narrative. The reader should be alerted, however, that Gunston's book is little, if any, better than Bryan Cooper's *Fighter* (1973). In fact, the same illustrator, John Batchelor, worked on both, which explains their similarity.

TWO other books concentrate on World War II and thus are more detailed and limited in scope. *Combat Aircraft of World War Two*^{††} compiled by Elke Weal has a

large format (9¹/₄-by-12 inches) and includes not only trainers and transports but also aircraft employed in the Spanish Civil War and the Sino-Japanese War. The illustrations, 176 full color prints of 120 types and 250 line profile drawings, are large, clear, and attractive. Almost 900 aircraft from 25 countries are listed, with specifications, performance and production data, as well as brief remarks. The book also contains 15 orders of battle. Most impressive is a very extensive bibliography, a device regrettably missing from most aircraft books; this bibliography is arranged by nation, and for the U.S. alone it lists almost 100 items. Thus, the book is a very good one-volume reference, for the scope is wide, the information detailed and accurate, and the illustration excellent. Weal has taken an old formula and turned out a superior product.

Enzo Angelucci and Paolo Matricardi are authors of a set that covers the same material.^{†††} *World War II Airplanes* is a two-volume work in soft cover and small format (5-by-7¹/₂ inches). All the aircraft are illustrated by color drawings (many of which are apparently based on photographs in the volumes by William Green) and three views. The text contains brief specifications, performance figures, and remarks; but Angelucci and Matricardi cannot compete with Weal in illustrations, scope, or bibliography. The only advantage of the Angelucci and Matricardi work over Weal is its lower cost.

THE remaining books are of a different nature. The most unusual is Eric

[†]Bill Gunston, *Fighters 1914-1945* (New York: Crescent Books, 1978, \$5.98), 127 pages.

^{††}Elke C. Weal, compiler, *Combat Aircraft of World War Two* (New York: Macmillan, 1977, \$17.95), 220 pages.

^{†††}Enzo Angelucci and Paolo Matricardi, *World War II Airplanes*, 2 vols. (Chicago: Rand McNally Co., 1978, \$6.95 each), 287 and 267 pages.

Brown's *Wings of the Luftwaffe*.† Brown was a British test pilot for six years and flew 55 German aircraft during and after World War II. In his book he tells of the 17 most famous. The book is superbly illustrated with a two-page cutaway drawing, a cockpit drawing, a full page of three views, and many clear photographs. The text gives an overview of the plane's development and then Brown's comments. He discusses the looks of the aircraft and then how to start, take off, fly, and land each machine. Most will learn something from this book. For example, in the discussion of the Messerschmitt 262, the reader is told such details as the aircraft's engine overhaul time (only 10 hours) and total life (25 hours) and that the safe one-engine speed was 180 mph, extremely high for World War II. Students of World War II aviation, especially of German aircraft, will surely enjoy this book. It is a new departure, extremely well done.

Flying Combat Aircraft of the USAAF-USAF is a collection of first person impressions edited by Robin Higham and Carol Williams.†† It is produced in large format (8½-by-11 inches) with clear photographs. Although the illustrations are more than adequate, they are not so profuse as those in Eric Brown's book and clearly secondary to the text, which consists of 22 articles on aircraft developed and used in the period before World War II on into the Vietnam period. The title is a bit misleading for one naval aircraft is included (F9F-2) as are three essentially noncombat aircraft (AT-6, C-141, and KC-135).

That each article was written by a different author who flew the aircraft discussed gives

this volume both depth and immediacy. As in Brown's book, the aircraft is described from walk-around inspection, through starting, taxi, takeoff, flight, and landing. The authors draw on their extensive experience with the aircraft and, of course, what they learned from other pilots. The writing is crisp and clear, a welcome improvement over most prose on aircraft, and it is also critical. We are told the differences between World War II bomber combat in Europe and the Pacific (p. 41) and why the American Air Force used two pilots per bomber. (p. 38) And that the B-24 " 'was a truck.' It looked like a truck, it hauled a big load like a truck, and it flew like a truck. . . . It was a good plane for its time in history, but it was not the shapely, romantic beauty some of its contemporaries were. In the air it was like a fat lady doing a ballet . . . it was never a star. It was an excellent truck." (p. 45)

There are many fine articles in this collection. World War II aircraft are well covered, and another article that is especially good compares the F-84 in Korea with the F-5 experiment (Project Skoshi Tiger) in Vietnam. There is something here for everyone, the technical detail, the war stories, the tidbits that never appear in print, the critical assessments, and even philosophy. Overall this volume is of very high quality, a valuable addition to the literature; and, thus, it is highly recommended.

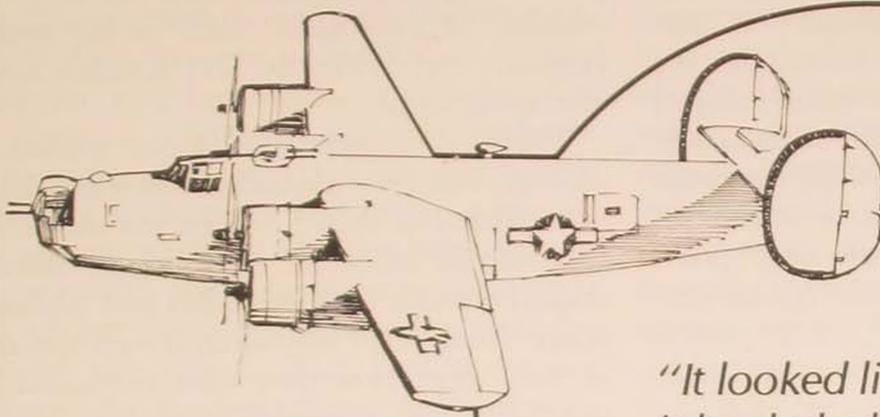
A similar attempt based mainly on oral history is Scribner's *At War* series. As of this date there are at least 19 books in the series, each devoted to a single American, British, or German aircraft. Some splice together a number of first person accounts, such as *Lan-*

†Eric Brown, *Wings of the Luftwaffe: Flying German Aircraft of the Second World War* (Garden City, New York: Doubleday and Co., 1978, \$10.95), 176 pages.

††Robin Higham and Carol Williams, editors, *Flying Combat Aircraft of the USAAF-USAF*, vol. 2 (Ames, Iowa: The Iowa State University Press, 1978, \$11.95), 202 pages.

caster at War:2 by Mike Garbett and Brian Goulding;† while others, although relying heavily on oral sources, are a standard narrative history, such as William Hess's *A-20 Havoc at War*.†† Because the end product of each volume is different, it is perhaps unfair to make more than just a few general comments about the set. First and foremost, the

specific aircraft as related by those who designed, built, serviced, and flew them, here it is in great and loving detail, just about the ultimate—an entire book. But aside from such addicts, or those searching for a gift or trapped by the rain, a definite word of caution. These books vary in quality not only from book to book, but in some cases, from



*"It looked like a truck,
it hauled a big load
like a truck,
and it flew
like a truck. . . ."*

graphics are superb, with numerous, excellent, large illustrations. Second, each book deals with design, flight, and combat operations. Third, there is little or no documentation. For those who want to know about a

chapter to chapter. In short, the cost is high, the detail is great; but most of all, the illustrations are terrific.

The last of these aircraft books also breaks new ground. Marcelle Knaack's study looks

†Mike Garbett and Brian Goulding, *Lancaster at War:2* (New York: Charles Scribner's Sons, 1980, \$17.50), 160 pages.

††William N. Hess, *A-20 Havoc at War* (New York: Charles Scribner's Sons, 1980, \$17.50), 128 pages.

at the development, procurement, and operations of 15 USAAF and USAF fighters since 1945, with a separate chapter devoted to each, from the F-80 to the F-5.† In addition 18 rarer fighters, XP-81 through YF-15, are briefly covered in an appendix. This is basically a reference book with such information as performance, specifications, and production totals. In addition, hard-to-obtain data such as cost figures, milestone dates, and major development, production, and operation problems are included.

This book is a USAF production that makes use of official sources. It contains the necessary information on its stated subject and is easy to consult. A number of improvements can be suggested. First of all, the prose is rough. The graphics should be vastly improved or removed as they are very poor, especially relative to the other books discussed. Specifically, while the one photograph included is adequate, the very small, crude three-view drawings are of dubious value. Footnotes are not used, although there is a four-page bibliography; if there cannot be footnotes, at the very least each chapter should have a separate bibliography. More operational information would greatly enhance the books. Nevertheless, this is a solid and worthy effort. For information on these aircraft, this is the best we have, and certainly the USAF should be encouraged to continue with the rest of the series.

IN CONCLUSION, then, here is more of the same. Recent books on aircraft empha-

size visuals while their texts tend to be brief and analysis rare; footnotes are seldom found while bibliographies are only a bit more common. Most of the books reviewed here, and for that matter most of the aviation books in print, concentrate on the period prior to 1945. Undoubtedly, aviation books and especially books on aircraft will continue to flow from the presses. Yet we can probably expect little improvement over what we already have, which is regrettable. But better production of old ideas, such as the Weal volume, or new ideas, such as the Brown, Higham and Williams, and Knaack books, give some hope.

There is a need for more studies on aircraft, but they should be directed deeper than what has thus far been the norm, and they should be better. Any serious endeavor should contain both footnotes and bibliographies. Analysis of why aircraft were designed as they were, how they were produced and modified, the problems of design, production, and operations, and how well they fulfilled their role are just some of the areas that require study. Other areas of neglect are aircraft engines, armament, gunsights, radios, life support systems, and maintenance. While oral history is now being used, other techniques such as quantitative methods and comparative studies should also be employed. What is needed is not more, but better; not old, but new; not the same, but different.

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†Marcelle S. Knaack, *Encyclopedia of U.S. Air Force Aircraft and Missile Systems*, vol. 1, *Post-World War II Fighters, 1945-1973* (Washington, D.C.: Government Printing Office, 1978, \$7.25), 344 pages.

IN SEARCH OF ASIA

DR. JOE P. DUNN

IN RECENT years, Asia has become center stage of American foreign policy. The aftermath of Vietnam unleashed new opportunities and directions. The Chinese rapprochement opened new parameters. Mistakes, misperceptions, and lost opportunities have characterized past American actions in Asia. Hopefully, the future can be more promising; but American knowledge of this immense continent remains inchoate and for many the East is still "the inscrutable Orient." This is not a favorable condition. This eclectic group of books addresses contemporary Asia and seeks to unravel the mysteries of the recent past and offer prescriptions for the future. The first three are general works; the latter three deal with post-Mao China.

THE WIDENING GULF

by Selig S. Harrison,† a journalist with extensive experience in Asia and former fellow at both Brookings Institution and the East-West Center in Honolulu, focuses on American failures in encounters with Asian nationalism. After explaining his methodology, Harrison undertakes a country-by-country analysis that emphasizes American misperceptions, particularly in misunderstanding the interrelationship between communism and nationalists. The author offers alternatives for future improvements.

Harrison ranges wide over a number of topics, and the comprehensive, textbook

nature of the book makes specific comments on its diverse content difficult. This review, then, will concentrate only on Harrison's discussion of post-Vietnam American military policy in Asia, a subject on which he is outspoken. He warns that the U.S. should not intervene in internecine national struggles. Even economic assistance to either adversary should be avoided. In confrontations between competing nationalists (even if one side is communist), a Western nation that becomes involved can easily become the ultimate enemy of both sides. Western nations' desired objectives, even when achieved, seldom are worth the cost.

Harrison advocates neither isolationism nor indifference. Rather, he counsels extreme caution and discrimination. Distinctions should be drawn between clear international aggression, such as Japan's invasion of China in the thirties, and the many instances of internal turmoil common in Asia: in Korea, Vietnam, Cambodia (now Kampuchea), Laos, Thailand, Taiwan-Mainland China, and Indo-Pakistan. Harrison stresses that these internal struggles must be individually evaluated and not routinely interpreted as theaters for containing Soviet power around the globe. In theory this sounds good, but reality is more complex. Aggression is not as easily defined as the author implies, and internal contests do have international significance.

Harrison's argument for a retrenched American military posture in Asia exhibits similar naïveté. He minimizes the growth of

†Selig S. Harrison, *The Widening Gulf: Asian Nationalism and American Policy* (New York: Free Press, 1977, \$15.95), 468 pages.

the Soviet naval forward base system and considers American forward area military facilities unnecessary. In what he labels a "worst case" scenario, he is most sanguine about American ability to transport personnel and equipment to conflict areas. In actuality, his worst case scenario is posited on very favorable conditions. Harrison's data are dated, and his understanding of current logistic realities is deficient. His dismissal of a Soviet naval threat in the Indian Ocean and his admonition that the U.S. should wait until a genuine threat against oil traffic occurs before committing American power in the area are simplistic.

Harrison also espouses gradual extrication from mutual security treaties in areas where the chances of external aggression are relatively remote. Furthermore, he argues that the U.S. should curtail its role in arms transfers. His prescriptions include the following:

- No arms should be tendered for internal order; only external defense requests should be considered.
- All transactions should be conducted on a strict cash-payment basis as credit encourages larger purchases than necessary.
- The U.S. should not allow itself to become the sole arms salesman in a market.

Concerning nuclear arms, Harrison intones that the U.S. cannot be sanctimonious about nuclear proliferation while continuing to stockpile her own arsenal. He argues that the U.S. should neither encourage nor discourage a nation's developing the nuclear option. Many nations consider a nuclear capacity essential to their national pride and national security. The U.S. has no right, Harrison contends, to impinge on such internal questions of national sovereignty.

In sum, Harrison's book is exhaustive,

provocative, and in parts profound. He has a feel for Asian thought and pride. On the other hand, the author is incredibly simplistic in dealing with military issues. The work was researched in the late sixties and written at intervals during the seventies. Consequently, his treatment of power realities is dated. His assessment of the relative U.S.-Soviet military balance is far out of date and totally inconsistent with current realities. Finally, it must be noted that the author's ponderous style seems inconsistent with his reputation as a noted journalist.

MOST collections of essays are uneven in quality. Although this evaluation can be made of the volume edited by Yung-Hwan Jo,[†] here the good clearly outweighs the mediocre. Most of the twenty articles come from symposiums on U.S. relations with South Korea and Vietnam, which were held at Arizona State University (1976) and the University of Southern California (1977).

In Part I, Soon S. Cho traces the tragedy of the Korean and Vietnam wars to the hastily conceived divisions of those countries at the end of World War II. With their attention on Europe, American policymakers proposed the divisions with little concern for the peoples involved or the potential dangers of division. Robert T. Oliver offers a favorable account of Syngman Rhee and the establishment of the Republic of Korea. Gareth Porter resurrects the errors of early American involvement in Vietnam in the 1950s. Douglas Pike presents his blueprint for future U.S.-Vietnamese relations. Former South Vietnamese diplomat Phan Thien Chau and American academic Jayne Werner, from entirely different perspectives,

[†]Yung-Hwan Jo, editor, *U.S. Foreign Policy in Asia: An Appraisal* (Santa Barbara, California: ABC-CLIO, Inc., 1978, \$24.74), 488 pages.

advocate U.S. overtures to the Socialist Republic of Vietnam in order to encourage her independence from P.R.C. or U.S.S.R. hegemony. Scott G. McNall advances a tenuous thesis that political events in Vietnam were totally incidental to the fact that the country afforded the U.S. a "theatrical stage" for demonstrating the viability of limited warfare. Donald E. Weatherbee concludes with a sound assessment of the current Southeast Asian balance.

In Part II, Gregory Henderson affords an insightful and passionate critique of U.S.-Korean relations in the wake of Vietnam. T. C. Rhee and Anthony Kahng offer more critical, assertive, and less satisfying reports. North Korean apologist Fred Carrier echoes communist rhetoric in a damning indictment of American imperialism in South Korea. South Korean diplomat Pyong-choon Hahm renders a stirring defense of the present regime and a justification of American support.

Part III includes articles on Japan, Taipei, and the Philippines as well as on Chinese and Soviet perceptions of U.S. policy in Korea. Among the more interesting is East German scholar Bernd Kaufmann's account of contemporary Korea. He criticizes the U.S. and praises Soviet policy; but his archvillain is China, which he considers the primary cause of instability and friction on the Korean peninsula. Robert A. Scalapino's brief, scholarly overview of South Korea is one of the best essays in the volume.

These brief remarks do little more than give an idea of the diversity of the book. Excerpts from the discussions, debates, and critiques of the papers add another valuable dimension to the volume. This is a significant book, highly recommended for specialist and layman alike.

THE title of the Wang and Chin volume clearly describes its subject.† Asia's mineral deposits are increasingly important in world affairs. Japan has emerged as the world's third largest producer of mineral and metal goods, and she is a leader in promoting mineral discovery not only in Asia but around the world. China's and Southeast Asia's modernization efforts depend on their ability to pay for imported Western technology with their mineral wealth.

After a general overview of Asia's role in the world's mineral economy and the continent's economic geography and industrial base, the authors survey 26 Asian countries following the same outline for each: (1) Brief introduction, (2) Significance of minerals, (3) Mineral supply position, (4) Nature of mineral enterprise, (5) Principal mineral industries, (6) Mine and industry workers, (7) Mineral transport, (8) Energy and power, (9) Summary. Each chapter is followed by a map of the country and by numerous pictures concentrating on economic affairs. Maps, charts, and tables throughout the book provide abundant specific data.

The book is an extremely useful reference work and is, surprisingly (at least to this reviewer), quite interesting reading. Not only scholars but the informed general audience will profit from this work. Indeed, the Westview Special Studies on Asia, of which this book is a part, is becoming a distinguished scholarly series dealing with political, economic, and social issues.

AUSTRALIAN Ross Terrill, associate professor of government at Harvard, is an acknowledged expert on China,

†K. P. Wang and E. Chin, *Mineral Economics and Basic Industries in Asia* (Boulder, Colorado: Westview Press, 1978, \$23.70), 358 pages.

author of *800,000,000: The Real China*, and a master of prose.[†] He visited China four times during the sixties and seventies. This book, a sequel to *800,000,000*, is a well-written, colorful, dramatic essay on events of 1976 and 1977, directed to the popular audience rather than to the scholar. Terrill untangles the complex and confusing events of these pivotal years, tracing the up-and-down career of Teng Hsiao-p'ing, the emergence of Hua Kuo-feng, and the brief triumph and decline of the ultraradical Maoist Gang of Four.

Throughout, the author editorializes freely. A strong proponent of rapprochement, Terrill advocates recognition of the People's Republic, severing of U.S. relations with Taiwan, and reintegration of the island with the mainland. At the time he wrote the book, Terrill feared an American tilt toward the Soviet Union and, thus, called for an evenhanded Soviet and Chinese policy. In recent interviews, he appears less concerned about a tilt toward the Chinese. Terrill sees little possibility of reconciliation between the two communist powers. He explains that only the most disastrous American policy could drive the Soviets and Chinese back into accommodation.

While interesting reading, the book has a major flaw. It offers nothing new, and the author's undocumented generalizations tend to be rather trite at this point. Unfortunately, the book was hopelessly dated by the time it appeared in print, and daily events continue to erode its usefulness.

ROBERT SUTTER's book is also dated,^{††} but it has greater basic sub-

stance than Terrill's. In the last year or so, many books assessing the history of U.S.-P.R.C. relations have appeared. This is one of the better studies. Sutter, a former CIA research analyst and now an Asian expert at the Library of Congress, offers new information and perspective as he traces the long road to rapprochement. He provides both a concise history of Sino-American relations and perceptive analysis of the dynamics involved.

The early chapters describe the dilemmas of the China Hands as they strove to maintain a tenuous wartime Chinese Communist-Kuomintang coalition against the Japanese. Sutter cites recently released State Department documentation that indicates early attempts by the Chinese Communists to achieve more favorable relations with the United States. The Chinese were wary of total dependence on the Soviet Union and made overtures to the U.S., but these opportunities were rebuffed.

While the Nixon visit in 1972 signaled a long overdue new direction, Sutter argues that American policymakers did not pursue all possible avenues of accommodation. Chinese leadership was divided over substantive issues but united in a pragmatic desire to rectify China's deteriorating position in the world balance of power. Writing in early 1978, Sutter proved to be an acute analyst as he predicted that the pro-modernization and pro-Western forces would reach out for better relations. However, Sutter did not fully appreciate the economic dimensions of the present rapprochement. He believed that there were few economic or cultural grounds on which to build a relationship; accommodation would be founded on strategic con-

[†]Ross Terrill, *The Future of China: After Mao* (New York: Delacorte Press, 1978, \$9.95), 331 pages.

^{††}Robert G. Sutter, *China-Watch: Toward Sino-American Reconciliation* (Baltimore: Johns Hopkins University Press, 1978, \$10.95), 155 pages.

siderations and the balance of power in East Asia. Just the opposite of Selig S. Harrison, Sutter counsels a continued strong U.S. military presence in Asia, for a diminished profile could lead to erosion of the gains of recent years. China will respect a powerful military potential and negotiate in good faith.

Sutter relies heavily on media analysis ("a systematic review of the controlled output of the Chinese media channels") to ascertain patterns, trends, and intentions in Chinese policy. In this approach, he uses recently declassified material from the files of the *Foreign Broadcast Information Service*. Important as is this analytic technique, the author recognizes the problems, weaknesses, and potential hazards of this approach. He proceeds with caution and does not exaggerate the merits of his methodology.

Superbly organized, tightly argued, and well written, this is a good contribution to available literature. Scholars will find it fresh and rewarding; the average reader will enjoy it as well. This is a first-rate study.

THE final book,† a collection of eight short stories originally published in Chinese between November 1974 and August 1976, differs from those reviewed above. Chen Jo-hsi, born in 1938 and educated in Taiwan, began to write early in her life. She demonstrated talent but because of her lack of life experience, her work had little substance, little depth of meaning. After postgraduate studies in the United States, she and her husband settled in the People's Republic and lived there for seven years during the Great Proletarian Cultural Revolution. In 1973 they were allowed to leave and

they settled in Canada. During her stay in China, Chen did no writing; however, since leaving she has gained an international reputation for her work about this period.

Although Chen is not political, her stories by definition take on a political dimension. As Simon Leys repeats in the collection's introduction: "In the empire of lies, the humblest truth is revolutionary, mere reality is subversive." And so it is with Chen's stories, which deal with the "small happenings in the everyday life of ordinary people." They capture better than any text or memoir the nature of life in Maoist China, and they have a power and dynamism difficult to put in words. As with all good fiction, it must be read rather than explained. The stories depict the undramatic horrors of totalitarianism intermingled with the joys, beauty, and frustration of normal life "subtly painted in Chekhovian shades of grey." Chen juxtaposes the warm and cruel, the heroic and trivial, the glory and tragedy, of 900 million people caught up in the reality of one of history's most traumatic moments.

Most Chinese who have lived in the P.R.C. despair of their inability to convey to the Western audience the nature of life in Maoist China without resorting to distortions or stereotypes. All agree that Chen alone seems able to bridge the communication gap. She has earned acclaim as a writer of world stature, and her life and writings will undoubtedly be the subject of many literary, political, and sociological doctoral dissertations. But above all, I must repeat, she must be read. There is more truth in these pages of nonfiction than in many collections of documents or monographs. Personally, I have not enjoyed, and felt, a book so moving in some time.

†Chen Jo-hsi, *The Execution of Mayor Yin and Other Stories from the Great Proletarian Cultural Revolution* (Bloomington: Indiana University Press, 1978, \$8.95), 220 pages.

WHITHER Asia? And what of U.S. policy in this area of the globe? The long Vietnam years cast off a few shackles and force open a few of the doors of ignorance and indifference. The new Chinese interactions uncover a few of the mysteries of this enigmatic nation. But the West has much to learn and experience if the past is not to be prologue of the future. The opportunities are vast; the

benefits for mankind unprecedented. But many warn, and not without justification, that the dangers should not be deprecated. The West might well take the admonition of Chairman Mao, who, though no longer oracle of the East, left an enduring message for us all: "What we need is an enthusiastic but calm state of mind and intense but orderly work."

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PROFESSIONAL EDUCATORS VERSUS EXPERTS

MAJOR JAMES H. CONELY, JR.

EVERYONE is an "expert" on education. Twelve years in the public schools followed by a few more in college make a person knowledgeable in all the processes of schooling and how it should be done—or so many people think. The problem with this attitude, of course, is that such knowledge is confined to one's own experience and is not broad enough to include the myriad complexities of learning and educational systems.

As it is popularly understood, education is alone among the professions. Without apparent mystery such as that of medicine or ambiguity like that of law, education is—or appears to be—an accessible field of study to anyone with or without a study of the field.

Consider, for example, the place of education in the Air Force. The 75XX Air Force Specialty Code (AFSC) is named as the officer's education career field, but it has little to do intrinsically with educating. Instead, it is concerned with administering educational organizations, and so any officer who can administer anything can be and is assigned to this field. On the other hand, the 0940 AFSC is specifically for instructors, but

it is held only for the duration of a temporary instructor assignment. It is not, therefore, a "career" and certainly not regarded as a profession.

Furthermore, to become an instructor requires only that a person be knowledgeable in the field to be taught (not surprising) and become a master of the mental processes of learning by completing an instructor course lasting all of six weeks (very surprising!). If nothing else, this serves only to foster the illusion that anyone can become an authority on education and all the mysteries of learning with little or no special study.

The question, of course, is not whether education is important but rather what is the best way to cause learning, organize learning activities, and organize a staff of people who are capable and knowledgeable enough to handle all of this. Experience may well be the best teacher, but without structuring, experience is inordinately time-consuming, wasteful, and, in the military, very dangerous. This, then, is the paradox—the feeling of many that education is important but educators are not.

THIS is not the thesis of two new books on Army education, each of which was written independently of the other and on quite different subjects. But reading them together reinforces the same conclusion. One is a highly specialized history, *The Leavenworth Schools and the Old Army* by Timothy K. Nenninger.[†] The other is *Common Sense Training*,^{††} a sort of guidebook of tips and techniques for teaching developed from the personal experience of its author, retired Army Lieutenant General Arthur S. Collins, Jr.

These two books have very different purposes and were written for very different readers. Nenninger has the historian-scholar in mind, and, judging from the price, his publisher has in mind limiting sales to libraries. The fifteenth in a series of volumes on military history, it documents in some detail the development of professional military education for Army officers in a twenty-seven-year period to the end of World War I.

Nenninger's experience as a military archivist at the National Archives has served him well. His book is authoritative, thoroughly documented, and well written. He traces the emergence of Army professional schools through such stages as "General Sherman and the School of Application," "The Elihu Root Reforms," "General Bell and the New Leavenworth," "The American Expeditionary Forces Experience," and other events.

Collins's book is written more for commanders of training units than instructors, but he includes a number of specific teaching

tips for use in classroom and field instruction. His approach is clearly pragmatic. His message is that whatever works and gets results by the most direct and efficient means is good. Everything else should be eliminated.

So, for example, in a chapter on "Advice for and about Generals," he deplors the time and effort spent by training units preparing for visits by high-ranking officials. He asserts that when officials visit units in training, "Clean work benches and wet floors [from recent scrubbing] are indicators of poor leadership and hours of lost maintenance time." (p. 208) Collins wants the time and resources used for learning, not for making things look good just to impress someone.

This laudable and practical approach to teaching is applied to a variety of training situations and subjects in separate chapters: "Training Management," and so on.

Unfortunately, it is just a record of one man's personal experience and advice. However practical and wise his suggestions may be and however wide and important his experience has been, Collins needs documentation, research, and testimony to support his ideas. Many readers will be persuaded by the force of his writing style and the Army positions he held, but there will be just as many who, if they disagree, will inevitably pass off *Common Sense Training* as just another man's opinion.

On the subject of "Training Management" and maintaining individual training records, Collins believes that

The best way to keep such records is in a small pocket notebook. This method distributes the work

[†]Timothy K. Nenninger, *The Leavenworth Schools and the Old Army: Education, Professionalism, and the Officer Corps of the United States Army, 1881-1918* (Westport, Connecticut: Greenwood Press, 1978, \$15.95), 173 pages.

^{††}Lieutenant General Arthur S. Collins, Jr., U.S. Army (Ret), *Common Sense Training: A Working Philosophy for Leaders* (San Rafael, California: Presidio Press, 1978, \$11.95), 225 pages.

load and allows each noncommissioned officer to spend only a few minutes a day on the training status of his or her troops. . . . I do not advocate any comprehensive system of training records. (p. 53)

It would be interesting to hear him defend this recommendation to accreditation evaluators or any other professional educator.

The problem is indicated early in the book as Collins asks, "If training is so important, why is it so often neglected?" (p. 1) A very good question. The rest of the book explains his own answer that it needs more "common sense." That may well be true, but it is simplistic. Other answers are also possible, not the least of which is that education in the military needs to be established as a career for professional educators.

Nenninger's book provides historical support for this second answer. Toward the end of his chapter on "Line School, Staff College, and Leavenworth Doctrine," he notes that "Contacts made at the schools had more than just social value. Numerous graduates attributed later success, at least in part, to associations first formed at Leavenworth." (p. 106) Later, "Because Leavenworth taught a systematic solution of operational problems, the personal contacts at the schools were particularly important." (p. 107) Although mention is made of the curriculum, the implication is that this was secondary in importance to establishing personal relationships between students.

If this is still true, one might reasonably ask whether schools are needed to meet this objective. If learning is not the primary purpose, then schools are a tremendous and unwarranted expense. If it *is* the purpose, then perhaps we need a more professional approach to learning in order to capitalize fully on what is learned.

Nevertheless, Nenninger's account suggests that Leavenworth's ultimate objectives were met eminently well. He stresses the use made by the schools of what he calls the "ap-

plicatory" method of teaching, meaning that students did not just talk about managerial-operational problems and strategies. Rather, they applied the principles they studied in simulated situations. Creativity and initiative necessary to solve the problems in those situations sharpened their leadership skills and showed early which students would be effective in real situations later on and which would not.

The thesis is clear that without the experience of those schools, Army leadership in World War I and after could not have been as effective: ". . . there was no doubt that Leavenworth training paid off, made a difference in how an officer performed, and was an improvement from previous wars." (p. 149) Nenninger concludes, "By means of the applicatory method, however, Leavenworth had trained its graduates in systematic planning and problem solving under pressure. . . . thus contributing significantly to the success of the American army." (p. 151)

Nenninger is not especially interested in details of Leavenworth subject matter, course objectives, curriculum decision-making, teaching procedures and philosophy, student and course evaluation, and other aspects of the educational process. His attention instead is focused on how the schools were developed and the results of what was learned there rather than on the learning itself. Of course, his book is a history of Leavenworth schools, not Leavenworth *education*, and that makes all the difference.

FOR the present, the most that can be said about these two books is that they are interesting, perhaps even useful in some respects. But they do not go far enough to have much lasting or widespread educational impact.

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Potpourri

Technology: Fire in a Dark World by Perry Pascarella. New York: Van Nostrand Reinhold, 1979, 172 pages, \$12.95.

The Last Chance Energy Book by Owen Phillips. Baltimore: Johns Hopkins University Press, 1979, 142 pages, \$9.95.

Both of these books deal in some way with technology and society. The first, *Technology: Fire in a Dark World* by Perry Pascarella, addresses technology and society in general, while the second, *The Last Chance Energy Book* by Owen Phillips, looks at a particular application of technology in society—that of obtaining energy sources.

Perhaps nowhere in our society today does the dualism of perception between artistic subjectivity and scientific objectivity become more apparent than in the area of high technology, especially energy. Technology, of course, is active and applied—it responds to felt needs, needs of both scientists and humanists. In this way technology provides a link between humanism and science, but it also causes friction because of our differing sensibilities.

Technology: Fire in a Dark World addresses the reconciliation of these two sensibilities. Pascarella calls for a blending of values for our future survival. The question, he says, is not whether technology will be part of our life in the future; rather, the only question is *how* we should progress technologically.

Pascarella takes a functional anthropological view of America's cultural development. He claims technology actually has defined our knowledge by providing practical application in response to felt need, often even before scientific understanding occurred. Historically, Americans have displayed a creative inventiveness that responded first to practical felt need, not to theoretical possibility. But today, Pascarella argues, we tend to demand that our practical application of technology be premised on a more rigorous understanding of scientific theory.

Pascarella sees American culture as a collective being with the fire of technology burning within. And looking to the future, he concludes that the meaning of this metaphor will not go away. And what society will man fashion in the future? Well, the author sees our salvation as inherent in our ability to change, our power as a culture to adapt. He presents a rather positive view of our future, an outlook of realistic hope.

Pascarella makes a provocative examination of American cultural evolution and its relation to technological development. He can help us bridge the perception gap, the dualism in our society, by showing us how varying perceptions and sensibilities have fit together historically and how they can fit together in the future.

In *The Last Chance Energy Book*, Owen Phillips looks at a particularly salient area of technological dualism today. Our history of energy development has emphasized pragmatic concerns over either scientific or humanistic values. Phillips sees technology as a force destroying itself by the very social norms it has created; specifically, cheap energy has created a materialistic life, where time became all important and consumerism became the foundation of everyday existence. But since the energy sources exploited to build this ever-expanding life-style are finite, an ultimate modification of this life-style is unavoidable. Like Pascarella, Phillips sees significant cultural change (Pascarella thought of it as evolution) in the future as a necessity for survival, but he is somewhat less optimistic about how natural this change process will be.

Phillips is also caught up in the cultural dualism between what often has been called the machine and the garden. He argues that we have accepted environmental damage, or have not lived up to our humanistic values, because of the life-style we have created and accepted as normal.

The author sees us as having arrived at that point where we must take our last chance for survival. In discussing this, he presents a thorough discussion of our fossil resources and an effective argument on the finiteness of fuels such as oil, natural gas, and coal. He also discusses synthetic sources and other forms of renewable energy. But Phillips's primary purpose seems to be a call to action, an argument aimed at generating greater harmony between our society's split sensitivities. And like Pascarella, he sees little alternative to our proper use of technology in the future. However, Phillips also sees the greatest hope coming from our inventiveness: "As we have seen, ideas abound. There is great potential."

The Last Chance Energy Book is well written and, of course, very topical. It complements Pascarella's overall philosophy. Phillips, in effect, tries to present an approach to bridging the chasm between the romantic and the classical, the humanistic and the scientific. Both authors have identified and treated well a significant area of social and military concern. I strongly recommend both books, especially for those who think they "know" how the world works.

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Austerlitz, 1805 by Christopher Duffy. Hamden, Connecticut: Archon Books, 1977, xii + 194 pages, index, bibliography, and illustrations, \$14.50.

Many historians describe the decisive battle of Austerlitz as Napoleon's greatest victory. Yet Christopher Duffy's book on this campaign is more than just a typical glorification of the brilliance of Napoleon or denunciation of the stupidity of Kutuzov. Instead of stressing only the impact of the personal leadership of these two commanders, Duffy examines in detail the capabilities of each opposing force and combines a study of the training of the forces, cohesion of each unit, and the leadership at the lower levels of each army to explain the outcome of the French confrontation with the Austrian and Russian armies in 1805.

The French army that marched to Austerlitz was the finest force Napoleon ever took into the field. Three years of preparation at the camp of Boulogne for the projected invasion of England had given the French army three major benefits: a capability for maneuver unsurpassed in Europe, unity in the army brought about from new regimental pride, and a new loyalty to Napoleon. As Duffy tells us:

Three years of hard training had overcome the indiscipline and negligence that were the legacy of the Directory, and aroused just sufficient frustration to put the troops in the mood to make short work of whatever Austrians or Russians first presented themselves to their bayonets.

In comparison to the hard-hitting French, the Austrian and Russian armies had many obstacles to overcome before they could become an effective force. The Austrian army was in the throes of much-needed reform, but since these reforms were implemented just six months prior to the campaign, there was simply not enough time between institution and actual employment for everyone to become familiar with the changes. The Russians also had many difficulties, but their chief hurdle was the lack of leadership at the lower levels of the army. Even though the steadiness of the Russian soldier is legendary, his courage was nullified by deficient command and control, especially at the regimental level.

This shortage of good Russian officers and the Austrian mistiming of their reforms brought armies to Austerlitz that did not have the unity or the training to stand against the French. Although the author fully recognizes the brilliant leadership of Napoleon, the major contribution of his new book is this analysis of the opposing forces and the discussion of how their abilities led to the decisive French victory. Once again

Christopher Duffy has given us an excellent book, and it should be in every collection of Napoleona.

Captain Robert E. Wolff, USAF
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United States Air Force Academy

Bataan and Beyond: Memories of an American POW by John S. Coleman, Jr. College Station, Texas: Texas A&M University Press, 1978, 210 pages, \$11.50.

John Coleman's book will never become a literary classic. At times it rambles, and events are treated rather sketchily in places. But it is, nonetheless, a book that is hard to put down.

Coleman talks of his assignment to the Philippines in 1941 and his subsequent capture by the Japanese when they overran the islands. His descriptions of life in a series of prison camps, of surviving the Bataan Death March, and of repatriation are chilling in their simplicity and nonliterary manner. One cannot doubt that he was there.

Bataan and Beyond contains some interesting historical sidelights, too. Coleman's description of the heroic effort to defend the islands points to the lack of preparedness of American forces in the Pacific in the period before the Japanese attack on Pearl Harbor. He also gives a rather vivid description of conditions in Japan in the closing months of the war from his point of view as a prisoner.

Coleman, an air corps officer assigned to the Philippines to train air corps units for infantry combat, was one of few who survived the ordeal. His unvarnished account, told in the language of a GI, is a remarkable eyewitness narration of one of the grimmer chapters in American history.

Major Charles Ray, USA
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The Battle of Normandy: Falaise Gap by James S. Lucas and James Barker. New York: Holmes and Meier, 1978, 176 pages, \$14.95.

In the weeks following the Normandy invasion, American, British, Canadian, and Polish armies surrounded 80,000 German soldiers. By the end of August 1944, 50,000 German soldiers had been captured and 10,000 killed trying to escape. This book briefly covers the events leading to the Allied decision to invade and then traces the development of the battle.

The outstanding feature of the book is the extensive use made of German documents and diaries to provide a unique perspective. Air power proponents will find ample support for the importance of effective air cover in the German sources that describe the devastating impact of Allied aircraft operating unopposed by a shattered Luftwaffe.

The book suffers from two major weaknesses. Their use of war diaries and other primary source materials has caused the authors to include excessive details. At times, the tank-by-tank descriptions obscure the reader's view of the larger issues. More objectionable, however, is the British authors' persistent anti-American bias. For example, American soldiers are described as "circumspect and modest warriors," with little or no supporting evidence.

Despite these flaws, the book should be of interest to those looking for a slightly different view of the Normandy invasion.

Major Michael R. Gallagher, USAF
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Airwar by Edward Jablonski. Garden City, New York: Doubleday, 1979, 259 pages, \$15.00.

There are other volumes on World War II, such as Cornelius Ryan's *The Longest Day*, that move with more narrative ease than Edward Jablonski's *Airwar*. Few, however, can equal his ability to relate a good "war story." The stated theme of *Airwar*, which combines for the first time Jablonski's four-volume series into a single volume, is to "emphasize courage and sacrifice without glorifying derring-do and fun and games."

Although the author does include an occasional look at the grisly side of war, one cannot help being caught up in the heroics of his subjects. The book is quite simply a compilation of war stories. By reviewing individual missions in battle after battle, he develops an effective collective view of the war. By rapidly shifting from the microscopic (an individual sortie) to the macroscopic (summarization of a major campaign), Jablonski personalizes the war while making the whole more understandable. The author discusses familiar battles such as the tragedy at Pearl Harbor and the incredible Doolittle raid, but by his looking at them through individual actions, the familiar takes on new meaning.

Another major asset of the book is the detailed look at German, Japanese, and British Air Force activity before the U.S. entry into the war. One noticeable weakness, however, is the lack of information on the development of the Russian air effort during the war.

Airwar's value lies not in providing a survey text of the Second World War in the air but in its personal look at the airmen who fought and died in the conflict.

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U.S. Occupation in Europe after World War II
edited by Hans A. Schmitt. Lawrence: Regents Press of Kansas, 1978, 172 pages, \$11.00 cloth, \$6.95 paper.

Despite the passage of almost thirty-five years, NATO and Warsaw Pact forces still face each other across the "temporary" lines of occupation laid down in Europe in 1945-46. In an effort to probe some of the reasons for the continued stalemate, the George C. Marshall Research Foundation in 1976 sponsored a seminar on U.S. occupation policies in Austria and Germany after World War II. Papers and reminiscences from the conference, attended by both scholars and policymakers active in the War and State Departments during the occupation period, have been collected and edited into one volume.

The majority of papers deal with the evolution during the war years of American policy toward the post-war occupation of Germany and Austria and the implementation of that policy. Soviet occupation policy and its impact on the Russo-American relationship are also addressed.

Two articles are of special interest. The first summarizes a roundtable discussion by U.S. policymakers of the implementation and results of the occupation policy. The second contains the reflections of Generals Lucius D. Clay, U.S. Military Governor for Germany, and Mark W. Clark, U.S. High Commissioner for Austria.

Both articles are valuable studies of the maneuverings between the War and State Departments over the creation and control of policy and the impact of that policy on the Allies, the occupied areas, and the Soviets. Military and civilian policymakers emphasize that the occupation program did not instantly emerge as mutually agreed on by all agencies involved in its creation but rather evolved slowly and only after extensive and, at times, heated debate.

These articles would prove valuable to students of the period or those nonstudents interested in understanding the roots of today's situation in Europe. The book contains extensive documentation; the editor, previously associated with the U.S. Army Center of Military History, has also provided some useful maps.

Lieutenant George A. Reed, USAF
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The Jet Makers by Charles D. Bright. Lawrence: Regents Press of Kansas, 1978, 228 pages, index + illustrations, \$14.00.

In *The Jet Makers*, Charles D. Bright analyzes the aerospace industry between World War II and 1972, a period of transition from reciprocating to jet engines. The author examines this era to answer the intriguing question of how the United States emerged as world leader of aviation technology despite early German, British, and Russian advantages in jet design and manufacture. Regardless of the impetus provided by World War II, catching up with and surpassing foreign competitors by 1972 were significant achievements for American aviation.

The Jet Makers focuses on the major industrial leaders who bore the brunt of adaptation to the jet age. Bright describes how these industrial giants coped with postwar cutbacks, the Cold War, air coach transportation, the Korean War, and the missile and space races, by diversifying into lateral or counter-cyclical industries, or by merging. When such business moves failed, the aerospace companies turned to their primary consumer, the government, for rescue. The end product of this peculiar chemistry of capitalistic enterprise, government sponsorship, and international threats has been an increasingly capital-intensive aerospace industry whose manufacturing function has steadily declined and whose rising product cost threatens to price itself out of the market.

Bright writes history as it should be written—with balance. To his credit, he avoids the conspiratorial thesis so popular in today's media. Given the multitude of statistics available and the numerous financial problems of this complex industry, the author could have produced a much more sensational account, for example, by pointing to the massive cost overruns in the Lockheed C-5A program and the Defense Department's attempt to conceal its mistakes. Instead, Bright produces a balanced, thorough, authoritative analysis of the industry which should stand the test of time.

The aerospace industry, however, does not escape unscathed. Bright severely criticizes the business for adopting the managerial techniques of its largest consumer, the federal government—an unfortunate but probably unavoidable process that has led to inefficiency. More insidious but potentially more damaging to the industry's health has been the substitution of a systems-managerial approach to problem solving for that of individual leadership, genius, or business sense. Bright suggests that the government has imposed a workable but costly system on the industry but argues that the best answer does not lie within that system. The government's approach (i.e., applying more money and engineers to aircraft development) is not

the best one. He would rather see a Kelly Johnson or Dassault style of development as opposed to ingrained traditional methods. His lesson is clear. The industry, to avoid pricing itself out of the market, needs to shed its bureaucratic superstructure.

Bright ends by answering his original question. By 1972, America had clearly won the race for leadership in the jet age by competing. Moreover, the aerospace industry remains basically sound. It suffers, however, from being capital-intensive and high-risk by its technological nature. Still, as long as America demonstrates the will to continue its technological dominance, Yankee know-how will see us through.

The Jet Makers is essential reading for the serious student of U.S. aviation development since the work is one of only a few thoughtful studies on the industry. As such, it will serve as a standard for others.

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Eurocommunism: Implications for East and West

by Roy Godson and Stephen Haseler. New York: St. Martin's Press, 1979, 144 pages, \$16.95 cloth, \$6.95 paper.

The Communist parties of Western Europe have recently become the subject of much academic and journalistic debate and investigation. The new term "Eurocommunism" implies that these parties are unique, Western, and perhaps even democratic. As such, they would not pose a serious threat to our democratic system. Authors Roy Godson and Stephen Haseler, drawing on the deliberations of a group of American and European experts, find that Eurocommunists are unique to their own national environments, but they still remain outside of and even hostile to the whole democratic, pluralistic fabric of our Western way of life.

The book is divided into three parts. Part I, "The Strength of Communist Parties in Western Europe," presents a picture of communist influence that is generally not well understood. These parties have far more power than election returns would indicate. They control major newspapers, labor unions, and social organizations and have considerable influence in the universities. Even the rather small British Communist Party has power out of proportion to its electoral strength, particularly in the labor unions and some colleges. Following the philosophy of Antonio Gramsci rather than that of Lenin, the Eurocommunist aims to control society and thereby automatically control the government. Lenin's plan was to achieve control of the

government first and then impose communism on the society at large.

The authors then examine the Eurocommunists in the context of local national politics. The main question here is: "Has Eurocommunism become Social Democracy?" The answer is a rather decided no. In fact, the Communist generally despises socialists. Unlike the other democratic parties of Western Europe, it is still the ultimate goal of the Communist parties to change the system. Even though they have put some distance between themselves and the Soviet Union and some Communist party leaders have made vague statements about keeping the parliamentary democratic system when they come to power, their own internal organization and their ideology tend to contradict such a commitment. They still adhere to such concepts as the hegemony of the working class and, while they try to explain how this differs from dictatorship of the proletariat, "hegemony" remains a fearsome term. "It does not sit well alongside pluralism." (p. 89)

Finally, the authors treat the question of the Eurocommunist parties in the international balance. For military readers, this last section is probably the most interesting. Almost without exception, these parties follow the Soviet line in international relations. Their leaders and newspapers turn every American initiative into an act of capitalist aggression or imperialism. They always praise the efforts of the U.S.S.R. even in places like Africa and Vietnam. At a time when Eurocommunism is becoming more socially acceptable, it is the message of this book that if these parties come to power they would destroy NATO, even if they tried to stay in it, and Western Europe would have to become Finlandized. The authors conclude, then, that the entry of European Communists into positions of power can only be seen as a major setback for the West.

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Strategy of Survival by Brian Crozier. New Rochelle, New York: Arlington House, 1978, 223 pages, \$8.95.

The third world war actually began in 1944 although we were unaware of it until the 1947 publication of James Burnham's *The Struggle for the World*. Now, some thirty years later Brian Crozier tells us that we are about to lose this third war and that by 1980 will probably be hopelessly defeated.

Like Edward Luttwak in some of his publications, Crozier sees the great Soviet world empire abuilding while we in the target area shrink into acquiescence. "For more than three decades a unilateral war of aggression, expansion and attrition waged solely on the Soviet and Communist side," has been the course of events.

Crozier then describes this third world war in phases, using valid historic data to build toward his primary thesis of Soviet expansionism. This war is fought without direct armed hostilities between the superpowers; instead it is peripheral, ideologic, psychological, and insidious. It is the kind of war democratic societies are least able and inclined to fight. Indeed, he says the enemy knows our weaknesses well from both his internal as well as external listening posts. In his conclusion, Crozier offers a blueprint for victory beginning with an understanding of the enemy and his myriad of weaknesses, followed by carefully determined short, medium, and long-term objectives with victory in mind.

Crozier directs the Institute for the Study of Conflict in London. He reads the *Daily Telegraph* and votes for Margaret Thatcher. He remembers Munich, Kim Philby, and 1968 Czechoslovakia. He also understands the softness inherent in open, democratic societies when faced by closed, autocratic despotisms. This volume counsels strength, unity, and determination and does that very well.

T.M.K.

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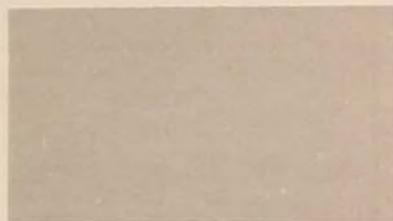
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The Air University Review Awards Committee has selected "Tactical Air Power within NATO: A Growing Convergence of Views" by Lieutenant Colonel Donald J. Alberts, Hq USAF, as the outstanding article in the March-April 1980 issue of the *Review*.

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