



# AIR UNIVERSITY

# review

MAY-JUNE 1977





*The Professional Journal of the United States Air Force*





# the editor's aerie

With this issue we regretfully bid farewell to our Associate Editor, Lieutenant Colonel Richard E. Hansen, on his retirement. His career spanned three wars, in which he flew variously as a fighter, bomber, and transport pilot. Interspersed among combat and Cold War assignments were academic, staff, and command positions, where he accumulated a wealth of experience that we leaned heavily on in editorial deliberations. We will not only miss his wise counsel but also his prolific pen and the provocative ideas that flowed from it. It is hoped that you will see more of his work in future issues.

In the opening article, Colonel Herman L. Gilster examines one of the basic Air Force missions—air interdiction—in the light of recent historical experience. His study indicates that the success of an interdiction effort is directly related to the intensity of the ground effort it opposes. Our cover depicts aircraft that have performed the interdiction role in the last three wars.

One of the imponderables of any future confrontation between NATO and the Warsaw Pact is the strength of the bonds that hold these respective alliances together. In the March-April issue, Wing Commander Peter Papworth offered his assessment of the integrity of the Warsaw Pact as an entity. Continuing in this issue, he examines the cohesiveness of each individual member nation to the pact. Although he would probably agree that such an undertaking is speculative and subject to ever-changing conditions, the reliability of the Warsaw Pact is certainly a critical element of the European power equation and invites a best estimate regardless of the relative scarcity of reliable information. We suspect that the Soviets are pondering the same problem and arriving at their own closely held input to their "correlation of forces."


In another thoughtful examination of intangible inputs to the power equation, Colonel William M. Charles, Jr., weighs the impact of the capability to wage war at all levels of conflict on our national will. Regardless of your predisposition, "Rethinking the Unthinkable" may provoke you to justify your own thoughts on the matter.

May 21, 1977, marks the 50th anniversary of one of aviation's great milestones, the first solo flight over the Atlantic by Charles A. Lindbergh. As a reminder of his legacy to the science of flight, we include a number of his thoughts throughout this issue.





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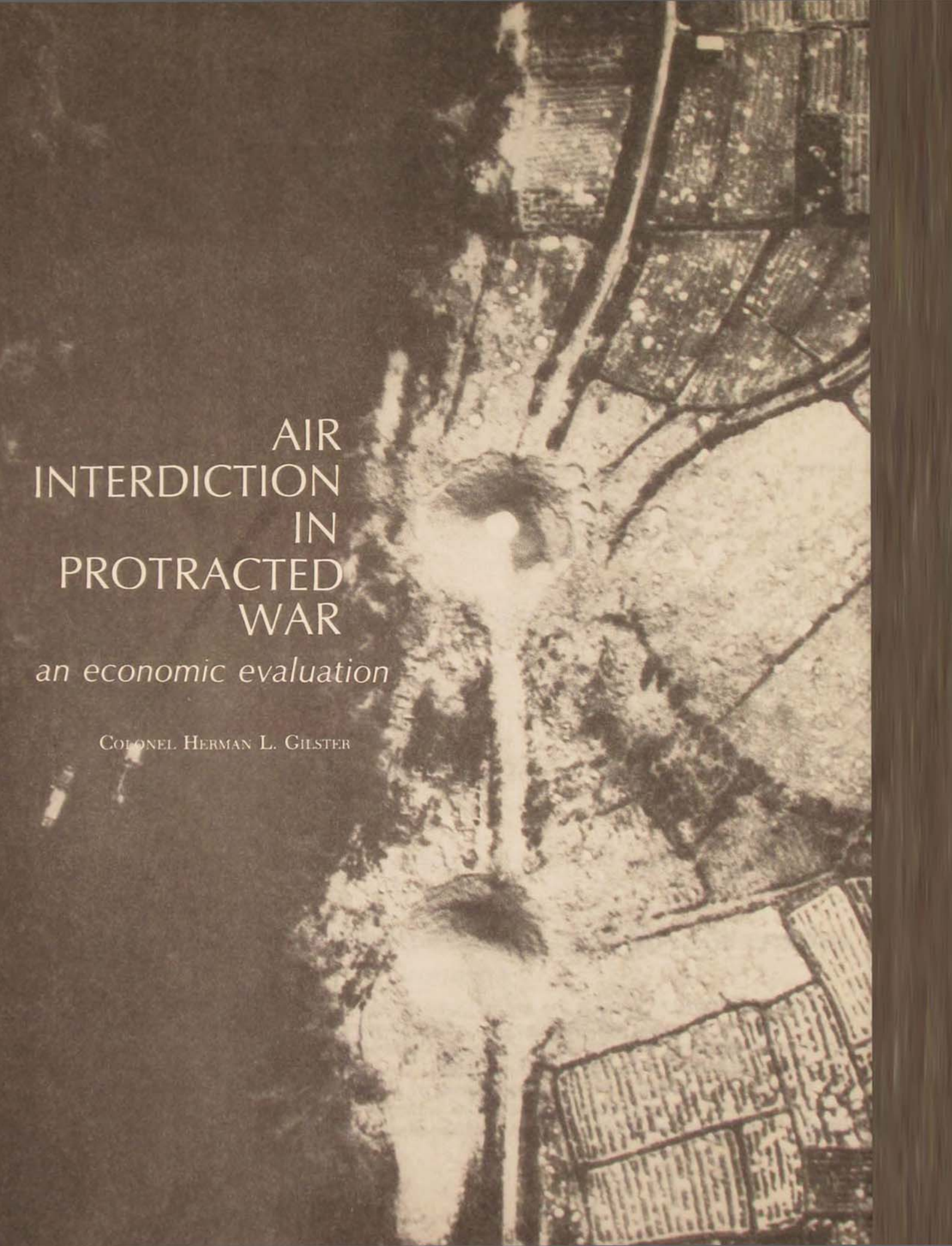
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### ATTENTION

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

An aerial photograph of a rural landscape, likely in a developing country, showing a network of roads and fields. The image is in black and white, with a dark, grainy texture. The text is overlaid on the left side of the image.

AIR  
INTERDICTION  
IN  
PROTRACTED  
WAR  
*an economic evaluation*

COLONEL HERMAN L. GILSTER



UNITED STATES Air Force doctrine defines three basic combat missions for tactical air power: counter air, close air support, and air interdiction.<sup>1</sup> Counter air operations are conducted to gain and maintain air supremacy by attacking the enemy's combat aircraft, air bases, anti-aircraft artillery (AAA), and surface-to-air missile (SAM) sites. Essentially, these attacks are designed to provide all friendly aircraft the capability to operate freely in the airspace above both friendly and enemy territory. The second mission, close air support, encompasses the use of air power in direct support of friendly land forces. Close air support attacks are made against targets of urgent concern in the immediate battle area and require direct and effective integration between the friendly ground and air forces. Finally, air interdiction, the subject of this article, is defined as the systematic attack of an enemy's logistics network for the purpose of destroying, neutralizing, or delaying his military potential (manpower and materiel) before it can be brought to bear effectively against friendly ground forces. The range of interdiction strikes may span a distance from the immediate battlefield up to, and sometimes including, the enemy's heartland. Normally, these attacks are made at such a distance to the enemy's rear that detailed coordination with friendly ground forces is unnecessary.

Categorization of the functions of tactical air power into the three missions cited already should not conceal the fact that these missions are in no sense mutually exclusive. Nevertheless, mission definition is useful, in that it provides a point of departure for any discussion of the impact and effectiveness of major air components. For instance, it is relatively simple to determine the success of the counter air function by noting the ease or difficulty with which friendly aircraft operate overhead. Likewise, the impact of the close air support function can be evaluated with

respect to the success or failure of the ground force it supports. Fortunately, these "measures of merit" are tangible, highly visible, and immediately apparent. Consequently, such operations are recognized as viable, productive missions of air power. True, the military services may debate the question of who can most effectively perform these missions, but there is no question of their importance or whether they fit into the spectrum of vital military operations.

The same cannot be said for the third mission, air interdiction. This mission, along with its effectiveness and viability, has been the subject of some of the most intense debates within civilian and military circles in the Department of Defense during the last ten years. This is not surprising because interdiction by its very nature may not carry with it an immediate payoff. In addition, it has been difficult to show, historically, a consistent payoff for the supply denial objective in terms of its impact on the outcome of a campaign. What is observed is merely the ability of the enemy to fight at the current operating level, a level which he may or may not have selected as a result of the burden imposed on him by air interdiction. Without knowledge of the enemy's precise intentions, one finds it virtually impossible to determine whether the interdiction effort seriously limited his capability to operate at a preferred level of activity. Indeed, some insight into the impact of interdiction during World War II has been gained from German records and interviews, but, barring a similar exchange, we will probably never be able to assess with certainty its true impact during the Korean and Southeast Asian conflicts.

### World War II to Southeast Asia

Historical reviews of our experience with air interdiction have concluded that the most dramatic successes were recorded when air interdiction missions were complemented



by aggressive ground operations on the part of friendly forces. Operation Strangle, the first full-scale, consciously planned interdiction campaign of World War II, is a prime example. Conducted from March through May of 1944 in Italy, this campaign was initially assigned the optimistic objective of forcing the withdrawal of the German armies from central Italy by denying them essential supplies. This objective was, of course, unrealistic. Only after the Allied ground offensive was launched on 11 May 1944 did the tangible effect of air interdiction become evident. Within three weeks, the four-month stalemate on the ground had been broken, and the German army was in full retreat. The enemy withdrew some 200 miles, suffering an estimated 70,000 casualties, about one-third of his force in Italy.

In an evaluation of this campaign, F. M. Sallagar of the Rand Corporation concluded that success of the Allied forces cannot be attributed to the accomplishment of the supply-denial objective.<sup>2</sup> The enemy transportation network had an estimated capacity of over 90,000 tons per day while enemy requirements totaled much less than 5000 tons per day. The stocks of some critical items such as fuel (gasoline and diesel) and ammunition remained fairly level or actually increased during the pure interdiction phase. They declined later when German army consumption rose steeply during the Allied ground offensive but never to the point of

creating overall shortages at the front. This is evident in the figures of Table 1, extracted from the quartermaster records of the German army for three key dates: (1) 15 March—the start of Operation Strangle, (2) 11 May—the start of the ground offensive, and (3) 30 May—the beginning of the precipitate German retreat.

Sallagar attributes the failure of interdiction to achieve the supply-denial objective to the following factors, most of which were inherent in the tactical situation confronting the Allies and therefore beyond their control.

During Strangle, the major factors were the redundant capacity of the enemy's transport network, especially in the north where the interdiction belt had been placed; German ingenuity in effecting quick repairs, finding alternative routes, and improvising substitutes; the frugal living standards and stringent conservation measures imposed on German armies, coupled with their low consumption rates during the two months while there was no ground action on the front; the intermittent periods of bad weather when Allied air was grounded so that the Germans were able to make repairs and move up supplies; and the lack of an adequate night bomber capability, which made the nighttime relatively safe for repair work and the movement of supplies.<sup>3</sup>

If the above rationale sounds familiar, one should not be surprised. With the possible exception of the last factor, the same list has been fundamental to debates on the viability of interdiction during the Korean and Viet-

Table 1. German army supply status during Operation Strangle (metric tons)

Item	15 March Stocks	(Average Daily Consumption)	11 May Stocks	(Average Daily Consumption)	30 May Stocks
Fuel	6,500	(380)	6,250	(450)	3,600
Ammunition	32,750	(400)	37,450	(800)	30,550

Source: F. M. Sallagar, *Operation "Strangle" (Italy, Spring 1944): A Case Study of Tactical Air Interdiction*, The Rand Corporation, R-851-PR, February 1972.

nam conflicts where, as Sallagar states, "we faced an enemy who was definitely not roadbound, whose consumption needs were frugal beyond anything the Germans ever dreamed of, to whom the holding of territory meant little, and who could select the time and occasion when he was willing to fight."<sup>4</sup>

Despite the obvious failure of Operation Strangle to achieve supply denial, Sallagar concluded that the interdiction effort deserved a major share of the credit for the Allied victory. Although interdiction did not achieve its stated objective, it contributed immeasurably to the defeat of the German armies by denying them the tactical mobility that was so essential to them. By the enemy's own testimony, the reduction and occasional paralysis of his freedom of movement contributed more than any other single factor to his defeat. The disruption effected by Allied air attacks overwhelmed the enemy's distribution system, and although the aggregate supply base was sufficient for combat operations, it was impossible for the Germans to position men and materiel at the right place at the right time.

This same pattern—aggressive ground action that forces the enemy to expend men and materiel in battle, overlaid by systematic interdictive air strikes which limit his capability to bring the required replacements into action—has resulted in some of interdiction's most acclaimed successes. The classic example of such a large-scale joint-force operation occurred preparatory to and during Operation Overlord, the Allied invasion of Normandy in 1944. The devastating impact of air strikes during that campaign was best described by Field Marshal Karl von Rundstedt, Commander of the German Western Front:

After the first few days, I had no hopes of defeating the invasion. The Allied Air Forces paralyzed all movement by day, and made it very difficult even at night. They had smashed the bridges over the Loire as well as over the Seine,

shutting off the whole area. These factors greatly delayed the concentration of reserves there—they took three or four times longer to reach the front than we had reckoned.<sup>5</sup>

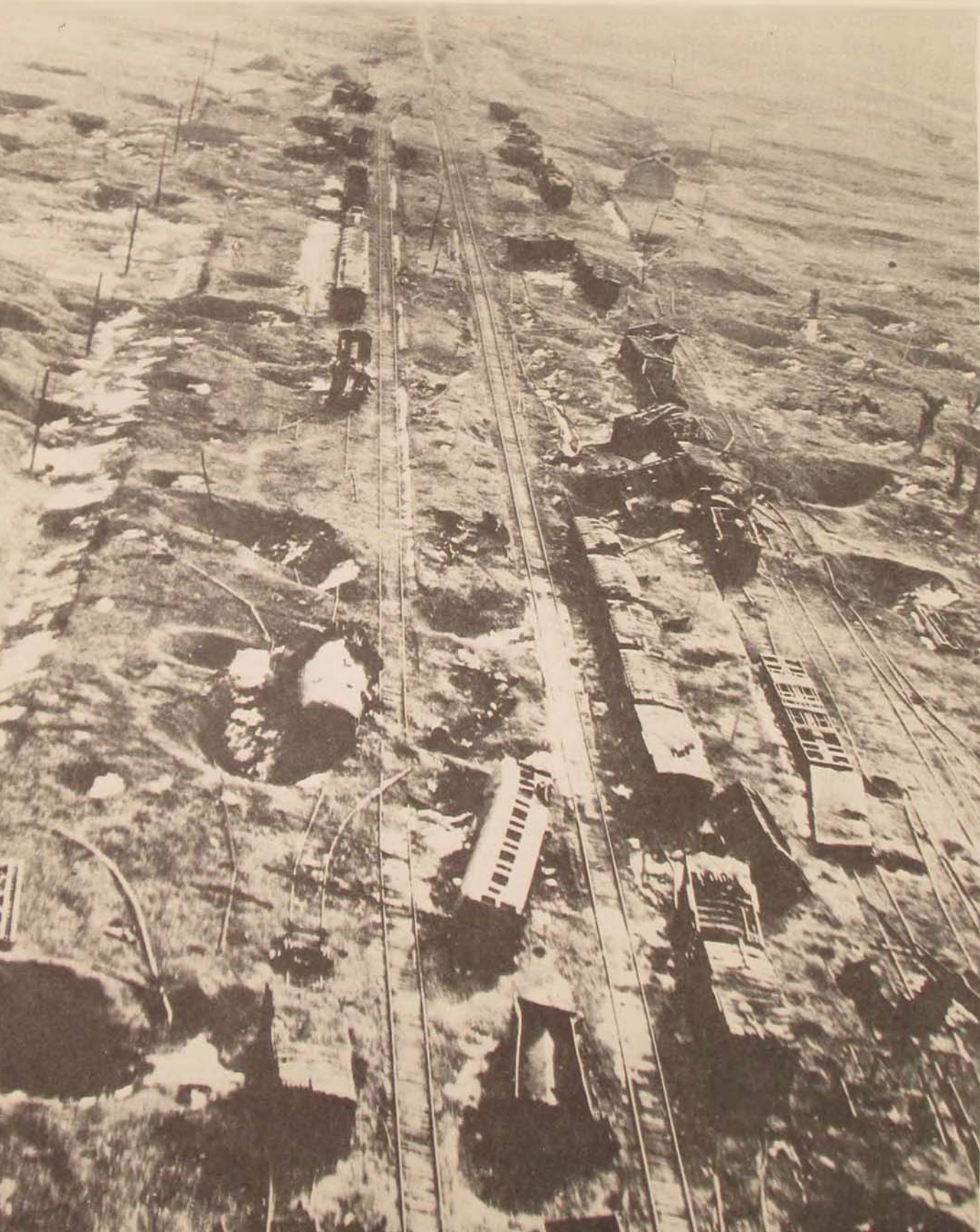
Despite the theoretical availability of the most elaborate and interconnected road and railroad network in the world, the German army was unable to match the Allies' cross channel rate of build-up in the battle area. This failure was in large part the result of air interdiction strikes.

Similar successes were recorded during the first year of the Korean conflict, when the United Nations's ground forces were actively engaged with the enemy. Starting in July 1951, however, when armistice negotiations were initiated, a new chapter in the history of air power was opened. As a result of the politically imposed military stalemate that lasted until the cease fire in July 1953, military commanders were confined in the use of air assets to a new, unfamiliar environment of protracted war. During the ensuing two-year period, a series of special purpose interdiction campaigns was waged on the railroad and highway network to the enemy's rear. Although each of these efforts met with initial success, the general consensus was that these successes were of fleeting nature.<sup>6</sup> The flexibility of the enemy's logistics system, the ability of the enemy to effect rapid repairs, and the extremely low supply requirements resulting from little or no ground action militated against any lasting success that might have been visualized. Hence, there is no tangible evidence that interdiction significantly impaired the enemy's capability during the two-year stalemate, and without access to his intentions or records, we cannot confirm with certainty the failure or qualified success of the interdiction effort in Korea.

The resulting frustrations, doubts, and differences of opinion over the viability of air interdiction were further exacerbated during the recent Southeast Asian conflict. Debate raged hot and heavy over the continued



*The armistice negotiations in Korea, from July 1951 until the ceasefire in July 1953, occasioned a new development in the application of air power: use of the air capability was limited to the unfamiliar environment of protracted war. Special purpose interdiction was used on the enemy's railroads and highways but to little permanent effect. Enemy reinforcements were severely damaged at this siding in northwest Korea, April 1952, but the track at right center shows evidence of recent repair, confirming that such reversals were only temporary.*





support of this expensive but questionable mission. This, of course, was no moot exercise since over one-half of all combat sorties flown during World War II, Korea, and Southeast Asia were allocated to interdiction operations.

Few experts question the viability of the "tactical" variety of air interdiction which can be closely related to battlefield success. Rather, it is the viability of the "long-term supply denial" version, which characterized U.S. air efforts during lengthy phases of the protracted conflict in Southeast Asia, that has been questioned. Although examples of the former are included, the main thrust of this article is directed toward the latter form of interdiction. In particular, it concentrates on an evaluation of the air interdiction campaigns waged for three and a half years in southern Laos. Not only did these campaigns receive the most extensive quantitative documentation of the war but they also provide the purest example of our experience with air interdiction in a protracted conflict.

### Air Operations in Southern Laos

Although bombing operations had been initiated earlier, the first full-season interdiction campaign in Southeast Asia was conducted during the summer of 1966 in an interdiction belt across the lower panhandle of North Vietnam.<sup>7</sup> In the summer of 1967, the weight of effort shifted north to the enemy's heartland for the purpose of destroying North Vietnamese military and industrial facilities and paralyzing the railroads. The campaign against the heartland was continued until the 1 April 1968 bombing halt again restricted strike operations to the lower panhandle. Then, on 1 November 1968, President Johnson halted all bombing of North Vietnam.

As the result of a contingent agreement with North Vietnam that prohibited movement of men and materiel directly through

the demilitarized zone between North and South Vietnam, attention immediately shifted to the Ho Chi Minh Trail in the panhandle of southern Laos, where the majority of enemy supplies moving from north to south now traversed. Thus began a series of dedicated interdiction campaigns, code-named *Commando Hunt*, that continued until the North Vietnamese invasion of South Vietnam in the spring of 1972. Strikes against the trail had been conducted earlier, but these were generally considered secondary to attacks on primary targets in North Vietnam. The official beginning of the concerted interdiction effort in southern Laos was 1 November 1968.

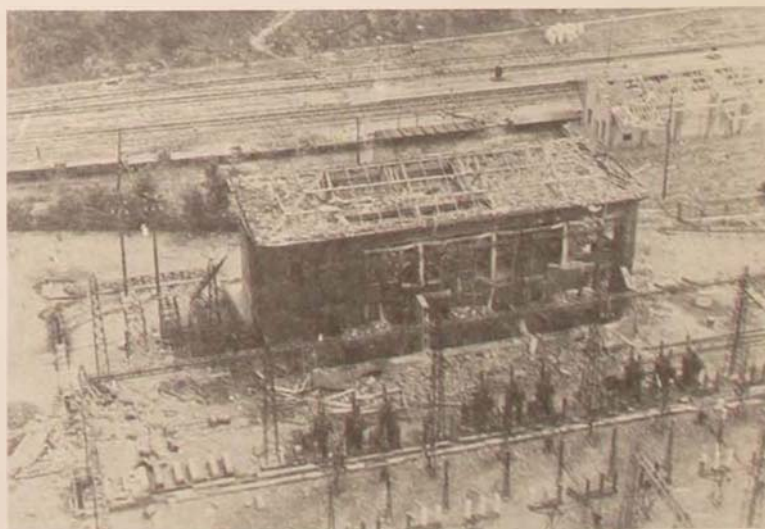
The geographic and climatic features of southern Laos conditioned all aspects of campaign planning, operations, and results. Prominent among the geographic features is the Annam Mountain Range, which forms a natural boundary between Laos and North Vietnam. It is rugged and difficult to traverse, and vehicular entry to Laos is possible only at the major passes. The roads through the passes, however, are normally concealed in clouds, and beyond the passes the tropical forests of Laos provide an almost continuous roof of natural concealment, severely inhibiting both the detection and destruction of targets from the air.

A second critical feature is the climate that is dominated by two major seasonal phenomena—the southwest and northeast monsoons. The southwest monsoon normally predominates from June to October and the northeast from November to May. The climatological patterns for each of the seasons are best remembered with reference to the Annam Mountains. During the southwest monsoon, or wet season, a low-pressure area draws air off the Indian Ocean, bringing thunderstorms and rains to Laos. During the northeast monsoon, or dry season, a high-pressure area blows over the Gulf of Tonkin and South China Sea, bringing low overcast

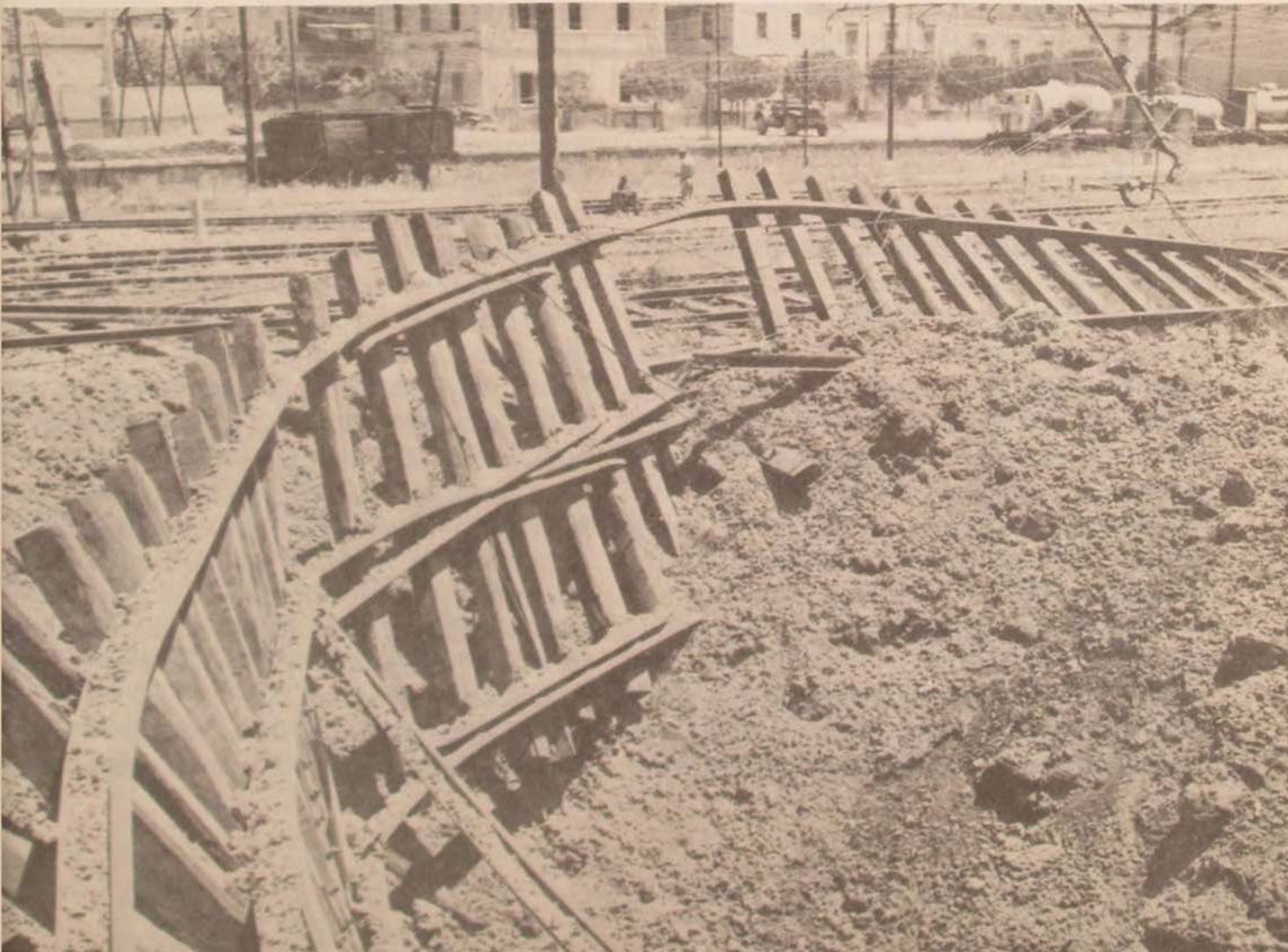


### Operation Strangle

*Operation Strangle, whose purpose was "to reduce the enemy's flow of supplies to . . . make it impracticable for him to maintain and operate his forces in Central Italy," was successfully effected in the spring of 1944 through the combined efforts of air interdiction and aggressive ground action. Allied jeeps move through Arezzo (above), following strafing raids by fighter-bombers of the First Tactical Air Force. Power stations (right) were obvious targets as were Mediterranean harbors such as Leghorn (opposite, above), choked with wrecked ships after Allied bombings. The destruction of the marshalling yards at Arezzo, a transportation center of central Italy (opposite), was yet another challenge to German proprietorship of the peninsula.*









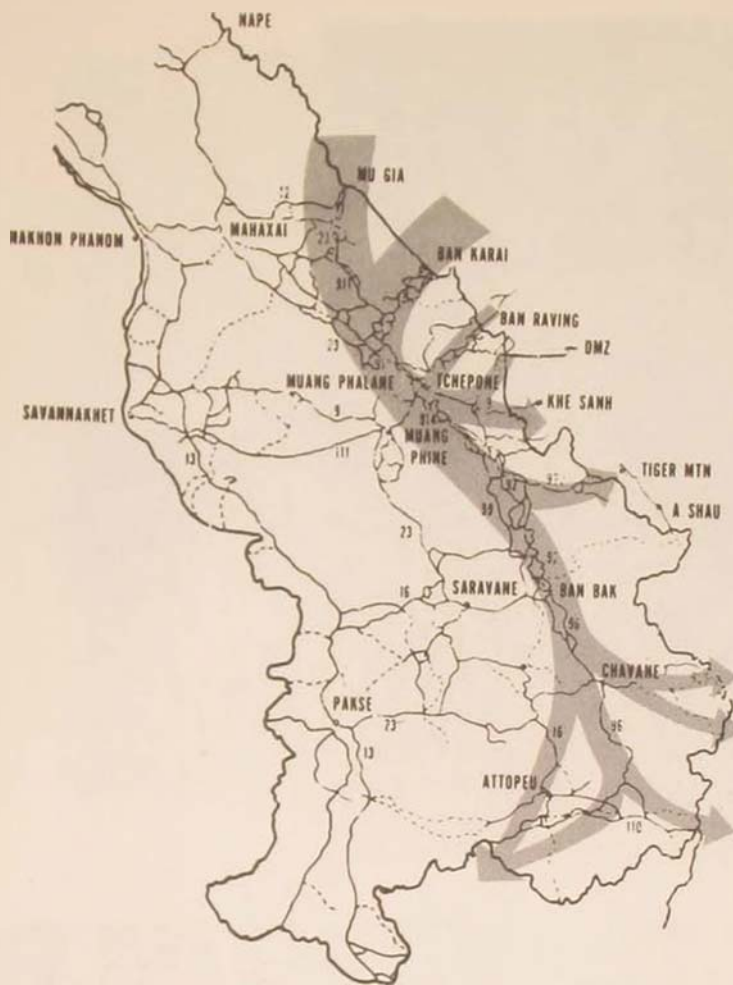


Figure 1. Ho Chi Minh Trail logistics flow

clouds, fog, and drizzle to North Vietnam and dry weather to Laos.

The shifting nature of the monsoons had an important bearing on the interdiction effort because the enemy geared his logistics flow to it. The northeast monsoons brought improved weather conditions over the roads and made them much more suitable for the movement of men and supplies. Consequently, the enemy concentrated his logistics efforts during these periods, and the interdiction campaigns were planned to respond accordingly.

These, then, are the characteristic features of the famed Ho Chi Minh Trail, which served as the primary artery for moving

North Vietnamese supplies into South Vietnam. The trail's history as a line of communication (LOC) dated back to World War II, when Vietminh bands trekked the same jungle paths. This LOC was developed from the existing footpaths into a highly organized infiltration route for men and supplies. The road network extended from Mu Gia Pass in the north, southward along the heavily forested western slopes of the Annam range, to a series of exit points stretching from just below the demilitarized zone between the two Vietnams, to the triborder region of Laos, Cambodia, and South Vietnam—some 500 kilometers to the south. (See Figure 1.) Although the road net was initially confined to the western slopes of the Annam range, continued expansion of the system pushed additional miles of motorable routes further westward in Laos, providing the enemy an increasingly wide choice of routes along which he could channel supplies. By the summer of 1971, this labyrinth of routes and bypasses encompassed an estimated 3500 kilometers of motorable roads.

In spite of constant improvement, the roads were still primitive by Western standards, consisting primarily of 18-foot-wide tracks carved out of the jungles. Although both gravel and corduroy surfaces were used to strengthen some sections, the roads were chiefly dirt and nearly impassable during the wet season. The roads were originally built by manual labor, but as time passed on, the North Vietnamese made increased use of bulldozers, roadgraders, and other heavy equipment. The route network was operated, maintained, and defended by an estimated 40,000–50,000 personnel organized in geographic area units called Binh Trams. Each Binh Tram had the necessary transportation, engineer, and AAA battalions to ensure movement and security of materiel and personnel in its sector.

The process by which supplies were moved southward was extremely complicat-

ed, requiring coordination between various transportation elements and numerous transfers of cargo in and out of vehicles and wayside storage areas. Almost all movement was conducted at night in a series of short shuttles, rather than by long-distance hauling. Drivers drove their trucks over the same routes night after night, becoming thoroughly familiar with their assigned segments. Periods of high moon illumination, which allowed travel without headlights, and low cloud cover were exploited to avoid detection from overhead aircraft. Truck movement began shortly after nightfall and normally trailed off about 3:00 a.m. to allow time for the unloading, dispersal, and concealment of supplies and vehicles before daylight. These tactics, developed in Korea and later refined in Laos, might be considered highly inefficient by Western standards, yet they were the most effective way of moving large quantities of supplies through a hostile air environment.

Although the North Vietnamese later made limited use of waterways and pipelines, their road network and trucks remained throughout the war the heart of their logistics system. Intelligence estimates put the North Vietnamese truck inventory in Laos alone at 2500–3000 during the 1970 and 1971 dry seasons with from 500–1000 moving per night, each carrying about four tons of supplies. Replacement trucks were drawn from large inventories maintained within the sanctuary of North Vietnam in the vicinity of Hanoi and Haiphong. During the height of the interdiction campaigns, the trail logistics system was defended against U.S. aircraft with an estimated 600–700 anti-aircraft guns.

On the U.S. side, a unique feature that distinguished the Commando Hunt campaigns from all previous interdiction campaigns was an electronic detection system that overlaid the enemy logistics network with seismic and acoustic sensors. These sensors were air-delivered devices that detected enemy activ-

ity by noting acoustic or seismic disturbances within the range of the sensor. They were delivered by fighter aircraft in strings of six to eight beside known routes. Each sensor contained a self-destruct feature that was activated by a timer or an antitamper device.

The sensor activations were received by orbiting aircraft and relayed to the Infiltration Surveillance Center, where they were analyzed and translated into truck movements. These movements then became the basic index of enemy truck activity. This information was used on a real-time basis to position the interdiction force and on a longer-time basis to analyze trends, compute enemy input and throughput supply tonnages, and assist in the location of truck parks, storage areas, and new roads.

#### *the Commando Hunt campaigns*

The Commando Hunt interdiction campaigns carried numerical designators that changed with the semiannual monsoon shifts. Odd numbers designated the high-activity/dry season campaigns and even numbers the low-activity/wet season campaigns. Naturally, the dry season campaigns, conducted officially from November to May, received the most attention and study. Enemy logistics activity in southern Laos during the intervening wet seasons was so low that the corresponding military operations could hardly be classified as campaigns.

Summary statistics for the dry season Commando Hunt campaigns are presented in Table 2. During the first Commando Hunt, November 1968 through April 1969, the dynamic reaction between opposing forces led to a refinement of tactics for employing air power in around-the-clock interdiction and prompted the development of specialized night attack systems, such as the advanced gunships, which reached maturity in later campaigns and compensated for the gradual withdrawal of other aircraft from Southeast

	Commando Hunt I	Commando Hunt III	Commando Hunt V	Commando Hunt VII
Inclusive dates	1 November 1968—30 April 1969	1 November 1969—30 April 1970	10 October 1970—30 April 1971	1 November 1971—30 March 1972
U.S. strike sorties (daily average)				
Fighter-attack	399	288	263	182
Gunship	2	8	11	13
B-52	22	23	30	21
Enemy resupply				
Input (tons)	45,000	54,000	61,000	31,000
Throughput (tons)	8,500	19,000	7,000	5,000
Ratio (TP/IP)	1/5	1/3	1/9	1/6
Enemy trucks				
Destroyed or Damaged	6,000	10,000	20,000	10,000

Source: Commando Hunt reports

Table 2. *Commando Hunt campaign statistics*

Asia.<sup>8</sup> During the six-month campaign an estimated 45,000 tons of supplies were transported into Laos from North Vietnam, but only about 8500 tons reached the border of South Vietnam—a throughput/input ratio of 1/5.<sup>9</sup> Some 6000 enemy trucks, the most lucrative interdiction target, were reported to have been destroyed or damaged by U.S. aircrews. These reports do not imply that all 6000 trucks were permanently disabled, only that they had been hit with ordnance. Statistical estimates indicate that on the average about 60 percent were actually rendered inoperative.

During the next dry season campaign, Commando Hunt III, the North Vietnamese logistics push during January and February reached new heights and was probably the most intense of the whole war. This effort, which netted a campaign throughput/input ratio of 1/3, may have been inspired by an anticipated loss of the alternate North Vietnamese LOC through Cambodia. Indeed, as the Commando Hunt III campaign was end-

ing, the Cambodians did deny the North Vietnamese use of the port of Kompong Som, through which a large volume of materiel had been flowing. In addition, the Allied crossborder penetration into Cambodia during May and June further compounded the North Vietnamese difficulties: large quantities of food and ammunition that had been available to support forces in the southern regions of South Vietnam were lost. Subsequently, the North Vietnamese became actively engaged with Cambodian government forces in operations that further increased their requirement for supplies from North Vietnam.

As a result, the Ho Chi Minh Trail assumed even greater significance as a LOC for enemy men and materiel. With the loss of Kompong Som and the supply line through Cambodia, the trail became not only the supply route for North Vietnamese and Vietcong forces in northern South Vietnam but also the main channel for resupply of enemy forces in southern South Vietnam and Cam-



bodia. Although some leakages through other areas were possible, the Ho Chi Minh Trail remained the last major logistics avenue for the transport of supplies from north to south as the Commando Hunt V campaign approached.

Commando Hunt V was officially inaugurated on 10 October, three weeks early, to seize the initiative prior to the enemy's logistics push into Laos, which, according to intelligence estimates, was to begin on 14 October. The campaign was highlighted by a sustained, concentrated bombing effort in the entry passes to delay and impede traffic flow from October to January, followed by direct air support of the South Vietnamese ground incursion into Laos in February and March, all overlaid with an intensive truck-killing operation throughout southern Laos. More than 20,000 trucks, double the number of Commando Hunt III, were reported destroyed or damaged, and of the estimated 61,000 tons of supplies brought into Laos from North Vietnam, only 7000 tons reached Cambodia and South Vietnam—a throughput/input ratio of 1/9.<sup>10</sup>

The next dry season campaign, Commando Hunt VII, was inaugurated as usual during the month of November. U.S. forces aver-

aged 182 fighter-attack, 13 gunship, and 21 B-52 sorties per day and reported destroying or damaging some 10,000 trucks through the end of March. The estimated throughput/input ratio was running at a respectable 1/6—5000 tons output for 31,000 tons input—when the enemy initiated a major invasion of South Vietnam over the Easter weekend at the end of March. Commando Hunt VII was immediately terminated, and the air resources that had been used on the trail were shifted to close air support and tactical interdiction roles within South Vietnam.

### The Estimated Results

The 1972 enemy invasion of South Vietnam brought into question again the overall effectiveness of the interdiction effort in Southeast Asia and leads us back to the beginning. What was the impact of air interdiction on the Communist capability to fight in South Vietnam? Unfortunately, no firm quantitative conclusion on the viability of the interdiction campaigns can be advanced. Unlike World War II, there are no supply records or interviews with knowledgeable persons available for assessing true enemy desires and the impact of interdiction on the fulfillment of those desires.

One can only speculate with the use of estimates that may not be completely accurate. Supply tonnages, such as throughput and the enemy's minimum daily logistics requirements in South Vietnam, were routinely estimated, but intelligence analysts admit that these values could be off by a factor of two. Cumulating these values over several years adds even another dimension of uncertainty if reporting consistency has not been maintained from campaign to campaign. So although the values presented are best estimates, one should not attribute high accuracy to the absolute stock levels and requirements outlined in the following paragraphs.

Figure 2. Ho Chi Minh Trail throughput, November 1968–March 1972

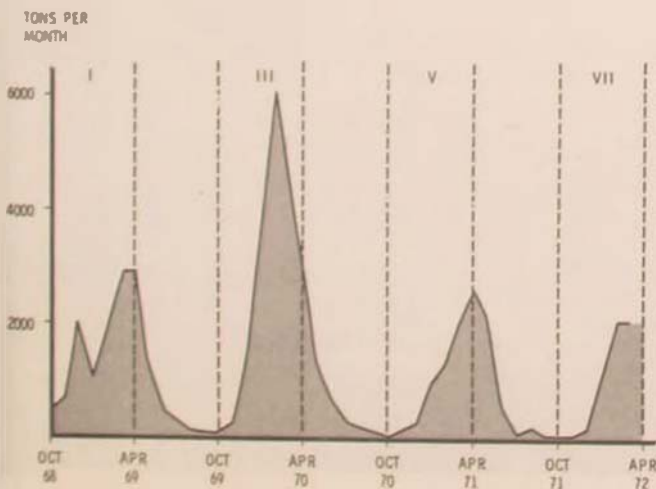


Figure 2 gives a profile of estimated amounts of supplies that reached the borders of South Vietnam and Cambodia from the initiation of the Commando Hunt campaigns in November 1968 to the enemy invasion of South Vietnam in March 1972. The seasonal nature of the North Vietnamese logistics effort is readily apparent as is the major supply offensive during Commando Hunt III. It is interesting to note, however, that enemy combat activity in South Vietnam decreased continually throughout this period, including Commando Hunt III, until the major invasion in the spring of 1972. For example, enemy attacks by fire averaged 216 per month during Commando Hunt I, 138 during Commando Hunt III, and 88 during Commando Hunt V. Although some analysts have attempted to relate throughput tonnages with subsequent enemy activity in South Vietnam, there appears to be no correlation between the two. In fact, if one compares data from the Commando Hunt III and VII campaigns, a negative correlation would be im-

plied, even though in the northern region of South Vietnam much of the invasion support flowed concurrently through the demilitarized zone and was not the result of a preinvasion effort along the Ho Chi Minh Trail.

Throughput to South Vietnam and Cambodia, of course, is only half the picture. To determine the enemy's supply status, we must also know something of his basic daily logistics requirements to survive and maintain current activity levels. The enemy's minimum requirements were calculated monthly by intelligence analysts of the U.S. Military Assistance Command, Vietnam (MACV), and were predicated on estimated enemy strengths, consumption rates, depreciation, combat activity levels, and the supplies destroyed and captured by ground and air forces during the month. Additionally, these supply requirements were stratified by source based on what portion could be obtained internally in South Vietnam and what portion must be obtained externally through the borders with North Vietnam,

*Operation Overlord, the code name for the Allied invasion of Normandy on 6 June 1944, was the classic large-scale joint-force operation. Prior to the landing, Allied air forces kept the Luftwaffe in a reduced state, to discourage their sending fighters to France, and in late May and early June made wholesale attacks on French airfields. A-20s (right) pummel a coastal battery captured early in the invasion; Malines rail yard (opposite, left) was damaged in an attack on 19 June 1944; a gun emplacement at L'Herbergement (far right) was destroyed by Allied bombs.*





Laos, and Cambodia. Admittedly, these values, based on a number of assumptions, were rough, but they provide some insight into the North Vietnamese and Vietcong supply requirements—if not in an absolute sense, at least in a relative sense.

Estimated enemy minimum logistics requirements in South Vietnam declined over time from a total of 300 tons per day during Commando Hunt I to about 200 tons per day for Commando Hunt VII. This decrease resulted from both declining enemy strength and activity levels and from revisions in basic consumption factors. The average tonnage requirement was 240 tons per day, of which 205 tons, or 85 percent, was food. The bulk of this food, about 80 percent, was obtained within South Vietnam and Cambodia. The remaining tonnage was comprised of equipment, weapons, and ammunition. Automotive fuel requirements, considered to be minimal, were not included.

The estimated minimum requirements from the trail averaged 35 tons per day, or 15

percent of the total. When combined with throughput tonnages from the trail, these estimates provide the stock profile presented in Figure 3. As stated above, caution should be exercised in interpreting the absolute values diagrammed in the figure. The profile depicts the cumulative amount of estimated supplies that flowed through the trail from the beginning of Commando Hunt I minus the estimated enemy minimum requirements from the trail during the same time period. All values are trail-related and exclude internal requirements and acquisitions, flows through Cambodia before the port of Kompong Som was closed in 1970, and the leakages and estimated preinvasion movement of 400–800 tons through the demilitarized zone. If throughput was underestimated or minimum requirements were overestimated, stock levels from the trail would be higher than depicted; if the opposite were true, the level would be lower. There is, then, a degree of uncertainty associated with the height of the stock profile.



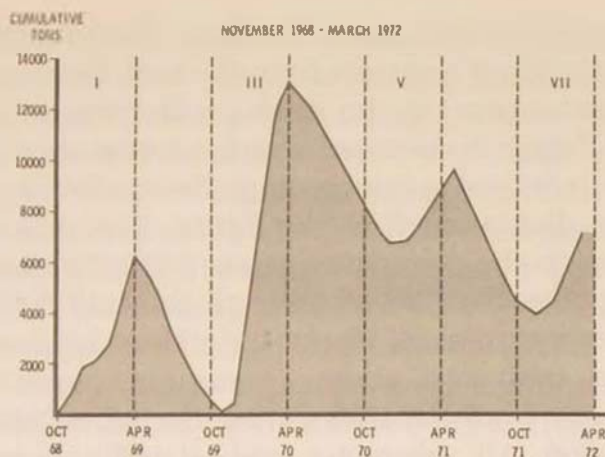


Figure 3. Cumulative throughput minus daily minimum requirement—from Laos, November 1968–March 1972

However, if any validity can be attached to the profile, several factors become apparent. First, the North Vietnamese broke about even as a result of the resupply effort during Commando Hunt I and, perhaps as a result of this and the prospective loss of the Cambodian LOC, launched a major supply offensive during Commando Hunt III. After that time, however, the stock level trend became unfavorable to the enemy. We might speculate that the increasingly effective interdiction effort influenced his decision to launch the 1972 invasion of South Vietnam before stock levels again approached zero, but the truth may never be known. The enemy rationale that led to the invasion is but another of the many unknowns that contribute to the uncertainty over the impact of the Commando Hunt campaigns.

Second, the profile indicates that the enemy had the logistics capability in March 1972 to launch an offensive in South Vietnam. Certain critics have advanced the argument that the invasion invalidated all previous logistics data because the enemy demonstrated the ability to support an invasion in spite of low throughput predictions. However, the enemy supply requirement from the trail, which contained the weapons and ammunition that

could not be obtained elsewhere, was important but not large. It would be simple to accumulate a sizable supply stock in light of the low-activity levels experienced during previous years. Complete interdiction of a flow of supplies is impossible, and without forced expenditure at the destination, a build-up is inevitable.

This does not mean the enemy was able to position the right supplies at the right place during the ensuing invasion—only that the aggregate tonnage appeared sufficient for an offensive. In fact, estimated throughput from the trail and the demilitarized zone during April and May was 4600 tons, and the estimated minimum requirement from both was 5300 tons. This decrease of 700 tons was only ten percent of the estimated stock level; yet, the enemy offensive had been blunted and was completely contained by the end of May. North Vietnamese objectives, which at a minimum included Hue, Kontum, and An Loc, remained unrealized. From all indications, air power had devastated the enemy's capability to continue the offensive.<sup>11</sup>

This is somewhat reminiscent of Operation Strangle in Italy, where German aggregate supply tonnages were sufficient for continued operations even after the Allied ground offensive, yet the German defensive posture was broken when tactical interdiction strikes completely overwhelmed the distribution system. It was impossible for German commanders to move and position men and materiel to the right place at the right time. Mobility denial, rather than supply denial, had been the key to the Allied success. Supply denial has seldom, if ever, proved to be a viable objective, and the experience in Southeast Asia tends to substantiate the validity of this premise.<sup>12</sup>

### Observations

One of the stated objectives of the interdiction campaigns in Southeast Asia was to



make the North Vietnamese pay an increasingly greater cost for aggression in the South. Air interdiction, directed at supply denial, does raise the cost of operations to the enemy; but in a limited war context, this cannot be a primary objective. For one thing, the increasing cost argument often leads to a double standard. While U.S. efforts are considered successful if they impose an increasing cost on the enemy, the increased cost imposed on the U.S. by the enemy's initial or counter efforts is not included in the game matrix. (Nevertheless, in the end U.S. withdrawal from Southeast Asia was predicated, in part at least, on the high cost of continuing the war.) Furthermore, in the North Vietnamese case, the cost to the enemy of replacing bomb damage in southern Laos was largely shifted through external aid to other nations of the Communist bloc. The cost to North Vietnam was mainly the opportunity cost of resources used along the trail. The supplies, trucks, construction equipment, and trained personnel employed in Laos could not be used to rebuild the North Vietnamese economy which had never fully recovered from the 1965-68 bombing campaigns. The fact that they continued logistics operations in southern Laos, however, indicates that these costs were bearable.

The increasing cost objective might more appropriately be applied to the December 1972 bombing of the North Vietnamese heartland. This campaign was aimed at applying maximum pressure through destruction of major target complexes in the vicinity of Hanoi and Haiphong. The large, concentrated strike effort severely damaged some of North Vietnam's most important and costly military and industrial facilities.<sup>13</sup> These particular facilities, which are of greatest interest if the increasing cost objective is employed, were previously restricted from air attack. As a result of these restrictions, less valuable interdiction targets along the logistics routes were struck. It is doubtful if the

value lost associated with these targets could ever make the cost of continued resupply unbearable.

IN SUMMARY, increasing the cost to an enemy is a necessary but not a sufficient requirement for an interdiction effort. The constraints associated with limited war, by their very nature, relegate this objective to secondary importance. In the end we must return to the original and basic question: What was the impact of air interdiction on the Communist capability to operate at desired combat levels in South Vietnam? From all indications it was positive but within the range of North Vietnamese tolerance. The true impact, of course, is uncertain, but this uncertainty in and by itself militates against the future allocation of air resources to long-term supply interdiction—especially if air resources are limited, as they well may be in light of increasing budget constraints.

Indeed, examples of the vital role played by air interdiction in the success of friendly ground forces have been cited in this text—the campaigns of Europe, the first year of operations in Korea, and the 1972 North Vietnamese invasion of South Vietnam—but in each case the interdiction effort could be directly related to a major ground action. The more intense the action, the more vital became the interdiction effort in forestalling replacements for depleted enemy forces.

However, the timeliness of replacements, a factor so critical to success in intense, large-scale confrontations between opposing forces, fades into relative insignificance as an element in protracted war. Protracted war implies time; and given time, temporary structures rise to replace destroyed bridges, by-passes circumnavigate interdicted route segments, and men and materiel are diverted from less essential to more critical functions. Moreover, in protracted conflicts characterized by guerrilla warfare, only a

minimum of supplies is required, and since the option to fight or withdraw remains open, neither the volume nor timing of replacements is paramount to ultimate success.

In concluding, then, it should be noted that air interdiction has been a victim of the type of wars waged during the past 25 years,

wars that degenerated into protracted periods of relative stagnation. Long-term supply interdiction, the version assigned to cover these static periods, could claim few successes. In fact, it is highly unlikely that any military operation—land, sea, or air—could claim success under such conditions.

*Office of the Assistant Secretary of Defense*

#### Notes

1. U.S. Air Force Manual 2-1, *Tactical Air Operations—Counter Air, Close Air Support, and Air Interdiction*, Department of the Air Force, 2 May 1969.

2. F. M. Sallagar, *Operation "Strangle" (Italy, Spring 1944): A Case Study of Tactical Air Interdiction*, The Rand Corporation, R-851-PR, February 1972.

3. *Ibid.*, p. vii.

4. *Ibid.*, p. xiii.

5. Basil H. Liddell Hart, *The German Generals Talk* (New York: Morrow, 1948), pp. 243-44.

6. Gregory A. Carter, *Some Historical Notes on Air Interdiction in Korea*, The Rand Corporation, P-3452, September 1966.

7. Material in this section was extracted from a series of classified reports prepared annually by the Directorate of Tactical Analysis, Headquarters Seventh Air Force, on the interdiction campaigns in southern Laos. These included *Commando Hunt*, May 1969; *Commando Hunt III*, May 1970; *Commando Hunt V*, May 1971; and *Commando Hunt VII*, June 1972. The extracted material is unclassified.

8. The gunships were C-130 and C-119 transport aircraft that were modified with sophisticated night detection equipment and 20, 40, and later, 105 millimeter cannons to destroy trucks moving down the trails of Laos. These aircraft were by far the most effective truck-killing systems in the U.S. arsenal.

9. Throughput and input were calculated by intelligence analysts who combined the number of southbound sensor-detected truck movements,

aircraft visual truck observations, and road and river watch team observations along the Laos entry and exit routes. Duplicate counts were then eliminated to obtain an estimate of the actual truckloads of southbound supplies that entered and exited the system. To the input figure was also added an estimate of equivalent truckloads of supplies that entered Laos through enemy pipelines and natural waterways.

10. A detailed account of the campaign by this writer, entitled "The Commando Hunt V Interdiction Campaign: A Case Study in Constrained Optimization," will be published in a forthcoming issue of *Air University Review*.

11. It should be pointed out that this represented the first North Vietnamese offensive in South Vietnam that was conducted in an exclusively conventional mode—complete with tanks, sophisticated crew-served weapons, and large attack formations. Thus the North Vietnamese were clearly more vulnerable to air strikes than in the past.

12. One reason for this is that troop movement requires greater LOC capacity than does supply movement. For example, the road movement of a U.S. infantry division normally consumes six to eight times more road capacity than does its daily resupply requirement. If the movement is by rail, the capacity difference is even greater, averaging about 135 to one. J. W. Higgins, *Military Movements and Supply Lines as Comparative Interdiction Targets*, The Rand Corporation, RM-6308-PR, July 1970.

13. A classified evaluation of the bombing results can be found in: Herman L. Gilster and Robert F. M. Frady, *Linebacker II USAF Bombing Survey*, Headquarters Pacific Air Forces, April 1973.

Science, freedom, beauty, adventure: What more could you ask of life? Aviation combined all the elements I loved. . . . I began to feel that I lived on a higher plane than the skeptics of the ground; one that was richer because of its very association with the element of danger they dreaded, because it was freer of the earth to which they were bound. In flying I tasted the wine of the gods of which they could know nothing.

CHARLES A. LINDBERGH, JR (1953)

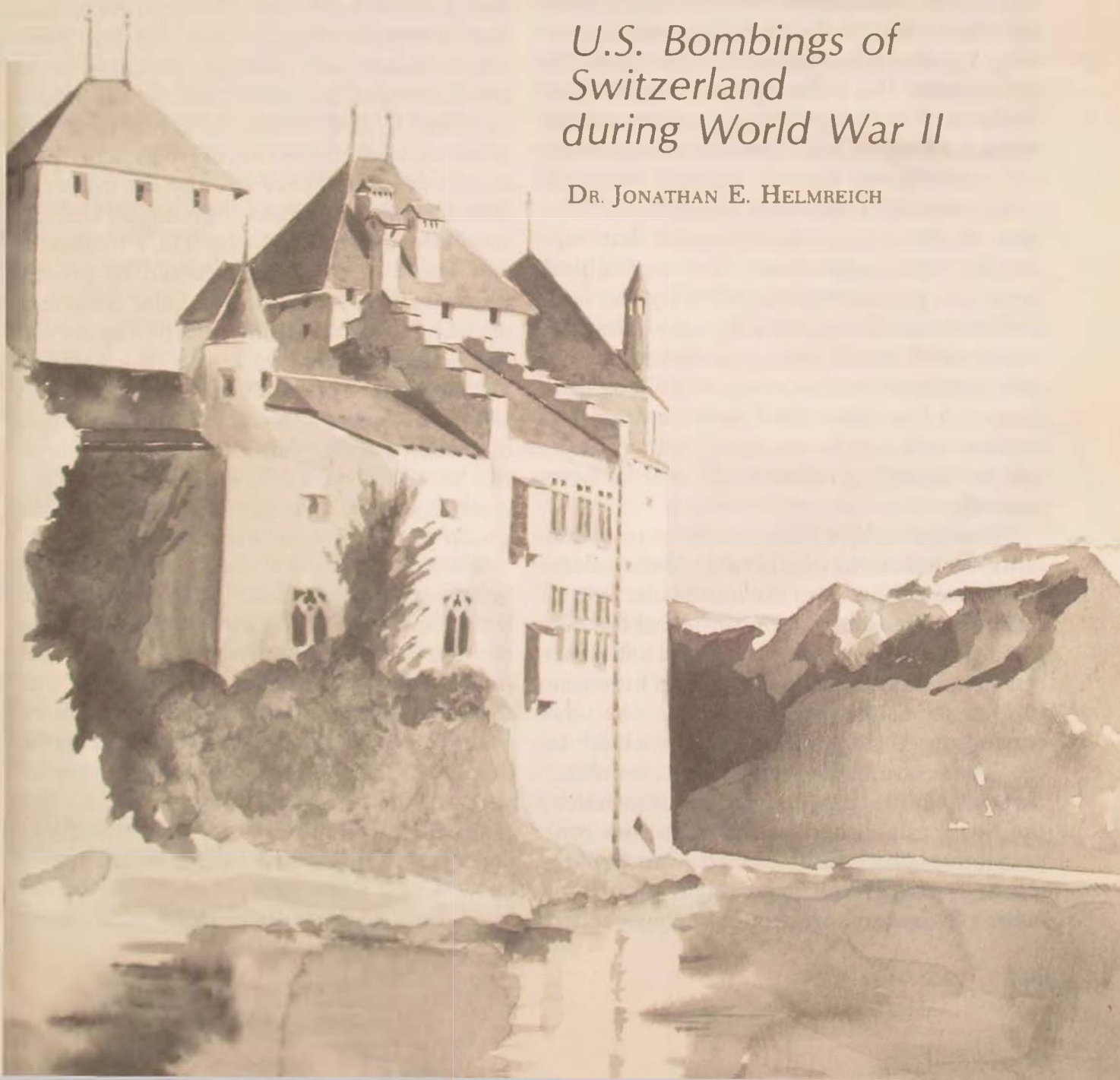




# THE DIPLOMACY OF APOLOGY

*U.S. Bombings of  
Switzerland  
during World War II*

DR. JONATHAN E. HELMREICH



THAT the United States bombed the small, neutral state of Switzerland during World War II seems at first implausible, but such attacks did occur. There was a scattering of incidents in 1943. Then on 1 April 1944 the northern Swiss city of Schaffhausen was seriously damaged. As the Allied air attack on Germany intensified, the number of raids on Swiss territory increased, culminating in the nearly simultaneous bombings of Basel and Zurich on 4 March 1945.

Where pertinent records still exist, the causes can be traced to bad weather, faulty equipment, incompetence, or excess pilot zeal rather than to malice or purposeful planning. Yet the lack of demonstrable intent did not mitigate the sufferings and suspicions of the Swiss. The United States' embarrassment was considerable, and the efforts of diplomats and generals to smooth matters revealed widely varying degrees of concern and conflicts of interest among agencies that supposedly were cooperating. The negotiations were also peculiarly influenced by the conflict between American acknowledgment of Switzerland's usefulness as a listening post and irritation over her economic aid to Germany; on the other hand there was tension between the aggressiveness of individual pilots and their instructions to observe Swiss neutrality.

Debate, of course, did occur over responsibility for numerous incidents.<sup>1</sup> Swiss efforts in this regard had two obvious goals: first, to make the offending nations aware of the acts their pilots were committing and take corrective steps and, second, to obtain indemnity for the damages suffered. As the expanding Allied air forces came closer to the Axis homeland and blind bombing through clouds became a frequent practice, the Swiss established increasingly stringent protective procedures. Allied war departments were informed that single aircraft violating Swiss territory would be approached

by Swiss aviators and ordered to land by means of green flares and the lowering of landing gear if speed permitted. Foreign military aircraft in formations of two or more would, however, be attacked by Swiss squadrons without warning. Such an attack actually occurred early in March 1944 when Swiss fighters shot down one U.S. bomber and forced another to land at Dübendorf.<sup>2</sup>

During this period the United States was ably represented in Switzerland by its experienced minister, Leland Harrison, by the military attaché, Brigadier General Barnwell R. Legge, and by the counselor to the legation, Jerome K. Huddle. The legation at Bern was a sensitive assignment, for the Swiss heard much, and discreet inquiries could produce valuable information. It was important that United States officials be favorably received and granted access to as many persons as possible. There was also the matter of the increasing numbers of grounded U.S. airmen interned by the Swiss. Their treatment and speed of repatriation could be greatly influenced by Swiss views of the American air war. Key to any list of sensitive issues was the matter of Swiss trade with the Axis and the willingness of the Swiss to allow goods in transit between Italy and Germany to pass over their railway lines. International law on this matter is complex, especially when the neutral power, virtually surrounded by one group of forces, must exercise discretion.

When he learned of the 1 April attack on Schaffhausen, Harrison promptly visited Swiss Foreign Minister Marcel Pilet-Golaz to express sympathy and regret. He was told that the offending planes numbered 50, that the killed and wounded amounted to more than 100, and that fires were still ravaging homes, factories, city buildings, and railway yards of the city of 22,000 inhabitants. The polite foreign minister voiced his inability to conceive of an explanation for "what apparently was a deliberate attack."<sup>3</sup> Nevertheless, he ordered that radio and press



announcements be restrained. Harrison himself warned his superiors:

If attribution to American Air Force is verified frankest and fullest explanations should be given to Swiss Government soonest possible accompanied by all other possible amenities from highest quarters. If our culpability confirmed effects will be most difficult to overcome.<sup>4</sup>

The question of U.S. culpability was quickly resolved. Carl A. "Tooney" Spaatz, Commanding General of the U.S. Strategic Air Forces in the European Theater of Operations, reported that two bomber groups admitted bombing in the northern salient of Switzerland on that Saturday, although the pilots claimed they had missed the town.

Commanding General of the Army Air Forces Henry H. "Hap" Arnold decided to let the State Department take prime responsibility for handling the matter. He did order the Operations Division of the War Department's General Staff to prepare a statement to be issued by the Secretary of War; appropriate action was also to be taken by the local commander.

Such action consisted of a formal call of apology by Spaatz, in the company of the United States ambassador to the United Kingdom, on the Swiss legation in London. In Switzerland, Legge conveyed to Division Colonel Fox Rihner of the Swiss Air Force his chief's extreme regret and assurances of future precautions. Legge himself expressed regrets to General Henri Guisan, the commander in chief of the Swiss armed forces. The formal statement of regret that Secretary of State Cordell Hull released on Monday admitted full responsibility and indicated the American government's willingness to make appropriate reparations for damages incurred insofar as it was humanly possible.<sup>5</sup>

The good effect of this statement was erased by an ill-phrased release by Spaatz's headquarters in London on Sunday mentioning that navigational difficulties and bad

weather had caused some bombs to fall by mistake on Switzerland. The deliberate understatement of the size and accuracy of the attack and the alibi of bad weather angered the Swiss press. In a telegram sent Sunday afternoon, Harrison had warned that "there is natural popular feeling throughout Switzerland of resentment and indignation on material, moral and theoretical grounds but it is as yet too early to gauge its depth or estimate its effect."<sup>6</sup> The London statement triggered the release of this resentment and indignation into public print. Harrison winced and telegraphed that "terrestrial weather conditions Schaffhausen area were reported exceptionally clear with excellent visibility. If conditions in higher atmosphere were bad, details thereof are essential if statement in communiqué to carry any conviction and not be regarded as inept attempt at evasion."<sup>7</sup>

The *Gazette de Lausanne* wrote that the excuse of poor weather was worthless and that "If American commanders know no better than to multiply bombardments without even taking geography into account it is but time to replace them by others." The *Basel National Zeitung* was similarly angry over the weather comment and claimed Schaffhausen was willfully attacked. "We do not exaggerate in characterizing [this] act as [a] 'war crime' with its destruction of irreplaceable lives, unique cultural objects, and much valuable property." The semiofficial *Bern Bund* was more restrained. One headline called "Stick to the Truth, Please!" but the editors did not question that the raid was a mistake. They urged that henceforth Switzerland should not rely on protests alone but should insist on specific steps being taken to improve security. The Berlin press had a field day decrying the terroristic actions of the U.S. gangsters.<sup>8</sup>

U.S. Army Chief of Staff George C. Marshall, perhaps more than any other member of the American military, felt serious con-

cern over the violation of Swiss neutrality. The impression to be gained from dispatches of lower-level generals is that of genuine regret and sympathy but irritation that further discussion of the matter was keeping them from getting on with their prime task of fighting the war. This was not the attitude of Marshall, a man with a strong conscience and sense of responsibility. He, along with Hull, Legge, and others in the War Department, held that a serious mistake had been made.

Marshall and Hull, therefore, lost little time in instructing Harrison to ask Swiss authorities for data on the full amount of personal and property damage so that the United States could pay reparations. The War Department in particular felt "that prompt action . . . without haggling the claims . . . will redound to our benefit."<sup>9</sup> One day later Hull released to Harrison \$1 million to be placed at the disposal of the Swiss government immediately. No special accounting

was required for its disbursement, and the Swiss were to know that additional funds would be forthcoming if the total cost of damages exceeded the million dollars.

At a subsequent Swiss press conference, Harrison gathered that the Americans' quick admission of error had been appreciated and compared favorably with the reluctant attitude of the British in cases of violation of Swiss airspace. The prompt provision of reparations had similar positive effect.<sup>10</sup> Though the raids on Schaffhausen were not as disastrous as initial Swiss protests had indicated, they were indeed serious.<sup>11</sup> He reminded his superiors that the death and damage "add up to a major catastrophe for Switzerland, and it must be candidly stated that public opinion was profoundly affected."<sup>12</sup> While the Swiss were willing to concede the immediate accidental aspects of the Schaffhausen raid, they saw the fundamental burden of avoiding such occurrences to fall





squarely on the United States government, for American planes would not have found themselves over Switzerland had they been operating with proper regard for Swiss neutrality.

The initial provision of \$1 million relief funds was followed by another \$3 million in October. An attempt was also made to meet the Swiss request for an explanation of the incident. Investigations revealed that weather had indeed been a factor, but that it was not so much the weather over Schaffhausen as that over France which caused the difficulty. Clouds and unsuspected winds from the northwest had the bomber formation scattered and navigators confused by the time the planes reached Strasbourg. Three widely separated locations had each been mistaken for the primary target of Ludwigshafen am Rhein: Strasbourg, Pforzheim, and Schaffhausen. Though the air speed of the 14th Wing was about 160 miles per hour, its ground speed was nearly 100 mph faster. A gap in the clouds over Schaffhausen gave the bombardier time to recognize a large city on the east bank of the Rhine but not enough to check out details that might have signaled the error in identification. No attempt was made to search out the butadiene factory, the benzol storage plant, or the compressor house, which were intended to be the aiming points for a visual attack.<sup>13</sup>

Though the command pilot of the 392d Bombardment Group was unofficially reprimanded for not following the division lead, the more serious factor in terms of the result was the error in identification. Theoretically, such identification problems had been met by a standing Eighth Air Force directive prohibiting bombing of any target within 50 miles of Germany's borders or in enemy-occupied countries without positive identification. What passed for positive identification was questionable, however, and in this case the combat crews were not even aware they were within 50 miles of Switzerland and

therefore required to exercise special caution.

This last dilemma was not spelled out by Secretary of State Hull when he officially communicated the reasons for the mishap to the Swiss minister. Reference was made to unexpected winds, the loss of the division leader, and failure of navigation equipment. He assured the Swiss that directives were in effect to prohibit bombings within 50 miles of Switzerland without positive identification.<sup>14</sup>

Despite the announced precautions and increased concern following the Schaffhausen tragedy, the incidents multiplied. Bombing damages were small, but there were many violations of Swiss airspace. The Swiss Air Force could do nothing against misdirected formations as large as 100 bombers, but the Swiss did take action regarding single planes.<sup>15</sup> As these were usually cripples searching asylum, American officers resented the Swiss attacks. At the close of May, under prodding from the War Department, Hull condemned a Swiss attack of 13 April on a damaged U.S. bomber. Six officers and crewmen had been killed despite their answering to Swiss rockets with signal flares and by lowering their landing gear. Harrison also registered a "formal and energetic protest."<sup>16</sup>

On 1 June, however, Hull had to admit that bombs jettisoned by aircraft over Samedan on 1 October 1943 were American. Damages and investigation expenses of \$56,515.00 were allocated from the Emergency Fund for the President of the United States, a special fund authorized by Congress for matters of a confidential nature and accounted for solely on the certificate of the Secretary of State.<sup>17</sup>

On 11 July eight bombers from a group raiding Munich were forced to land in Switzerland by Swiss pursuit planes; on the twelfth ten planes were forced down, and on the thirteenth five were required to land. The incidents were not denied; the U.S.

forces merely quibbled over the number of planes actually escorted by Swiss fighters to landing fields or landing on their own. On 19 July one crippled bomber which had been abandoned by its crew crashed into the Castle of Weyden, resident of Max Huber, President of the International Red Cross. In reply to Swiss remonstrances, the desk officer in the Division of Western European Affairs of the State Department told the Swiss chargé d'affaires that while efforts were being made to avoid violations, nevertheless, "in his personal opinion it was obvious that as increasing numbers of bombers are used in missions against those parts of enemy territory which are near Switzerland, it is manifestly impossible to hope that occasional violations will not occur."<sup>18</sup>

The violations did keep on and with good reason. While some pilots could express total surprise that bombs they had jettisoned landed in Switzerland rather than in France, all the Americans knew that if a plane could not make it back across the English Channel, it was far better to land in Switzerland than behind German lines. The Swiss understood this, but their posture as a neutral required that they make some mild protests. Moreover, continuous raising of the issue kept the Americans alert to avoid a repetition of the Schaffhausen affair and ready to make good on any claims the Swiss might present.

The Americans grew annoyed with the game. As General Spaatz's chief of staff commented later, "We had a war to fight, and we had to get on with it."<sup>19</sup> Thus as early as June, Colonel Harold R. Maddux, Chief of the Liaison Section, Theater Group, Operations Division in the General Staff of the War Department, was telling the State Department that unless a given incident represented a matter of great importance he "would not like to irritate . . . [the commanding general] by continued requests for information."<sup>20</sup> Paul T. Culbertson of State's Division of West European Affairs agreed. When Gen-

eral Eisenhower failed to reply to a violation inquiry, the diplomat commented: "It is believed quite likely that the theater commander has experienced considerable difficulty in framing a reply concerning instances of this sort which it appears may be continued."<sup>21</sup>

Hull, nevertheless, remained concerned about the repetitious nature of the problem. Writing to Henry L. Stimson at the War Department, the Secretary of State commented that he knew such incidents would probably increase as fighting developed in proximity to the Swiss border, but he wished that the competent officials be "vividly refreshed" regarding the prohibition of bombing within 50 miles of the Swiss border without positive identification. Because the Swiss could render invaluable services on behalf of American prisoners of war, Hull wanted to be "in a position to acknowledge frankly and to offer the regrets of the American Government for such of the incidents . . . as are substantiated by the facts."<sup>22</sup>

Stimson concurred in part. The Swiss minister should be assured that "every reasonable effort has been made to avoid violation" and that previous incidents had been "forcibly brought to the attention of the theater commander. . . ." <sup>23</sup>

This had been done, but there was no great interest within the theater command in tracing down the various Mustangs and Thunderbolts presumably responsible for the incidents. Major General J. E. Hull of the Operations Division of the General Staff advised Stimson that specific responsibility could not be assessed for many mishaps; it could be presumed that American aircraft were involved "even though it is known that the Germans have repaired and flown Allied aircraft in combat and it is possible that some of the incidents were deliberate efforts by the Germans to injure Allied relations with Switzerland."<sup>24</sup> He suggested reparations be paid even though there might be doubt of Ameri-



can guilt. Stimson therefore pointed out to the Secretary of State that:

The diversion from the principal task of pursuing the war in Europe with utmost vigor which would be required to completely and thoroughly substantiate or refute these allegations is not warranted at this time.<sup>25</sup>

THE pattern of violation, apology, reparation, and new violation was not impressive. This was why, when the Swiss made a special request, the War Department thought it wise to reply in the affirmative.

There were those who disagreed. Major General Kenneth W. D. Strong, Chief of Intelligence, Supreme Headquarters, Allied Expeditionary Forces (SHAEF), wrote from the forward headquarters of the Allied forces:

Because of violations of Swiss neutrality by Army Air Forces, the United States War Department has recommended approval of the Swiss request that Swiss observers be attached to the Allied Expeditionary Force with the object of counter balancing the effect of these unfortunate incidents and to establish friendly liaison between the United States and the Swiss.

It is my opinion that the proposed action will create a serious security hazard to future operations and should not be permitted.<sup>26</sup>

The request had been put forward at the end of September 1944 by General Guisan, the Swiss commander in chief, and supported informally by the Swiss foreign ministry. Legge thought acquiescence to the assignment of one or two Swiss officers to the Allied staffs in Western Europe would greatly facilitate his contacts with General Guisan; Harrison recommended the move as a step toward improving relations.<sup>27</sup>

At work again here, as in the differing degrees of concern regarding the accidental bombings, were the varying perspectives

and immediate preoccupations of the officers at the front and the policy-makers in Washington. The War Department initially went along with the Swiss idea but soon encountered all sorts of opposition. The theater commanders were not interested in having to host observers and distrusted the Swiss military. Strong insisted that if overall policy required assent to the Swiss request only two officers of field grade be permitted to observe. Their names should be cleared by the British and American attachés in Bern, all their communications should be sent through U.S. ciphers, and their personal mail censored. They should stay at least four months, during which they could not travel out of the Allied Expeditionary Force zone nor move to the very front. They should be given no information regarding secret equipment or operations and should always be escorted by an Allied officer.

At the close of September Deputy Chief of Army Staff Lieutenant General Thomas T. Handy, working in the Pentagon, contacted Lieutenant General W. Bedell Smith, Eisenhower's chief of staff, for his opinion. Smith's reply was similar to Strong's. Handy wrote Arnold:

The reason is that the SHAEF people are convinced that the Swiss General Staff is full of German sympathizers. As a matter of fact, Bedell Smith says that they believe about half the Staff has a close tie-in with the German General Staff.<sup>28</sup>

Both Smith and Handy agreed that placing extensive restrictions on any Swiss observers would defeat the object of allowing them to come. It would be simpler and cleaner to say no, but Legge was not happy about transferring that message to the Swiss general. He made one last try, writing Bedell Smith on 9 November.

Our situation here is extremely tenuous. Repeated violations of the frontier are bringing about a feeling of bitterness on the part of the Swiss, especially in Army circles.

Today, two Swiss bridges and a dam on the Rhine were bombed. In view of my recent approach on the subject of the Rhine control, this puts me in rather a difficult situation. . . .

I feel that with the Swiss it is more a question of loss of face which is hurting them than anything else. They feel that we are friendly towards them but still we do not trust them on a mission with our Army.<sup>29</sup>

If Smith would reconsider, it would greatly assist Legge's problems. The interests of some thousand air force internees were involved.

The following day General Omar N. Bradley, commander of the Twelfth Army Group, telegraphed Smith requesting authority to accept a Swiss military observer in order to strengthen the hand of Allen Dulles, who was heading up the Office of Strategic Services (OSS) intelligence activities in Bern. This appeal was no doubt stimulated by a message similar to one Arnold received the same day from Bill Donovan, Chief of the OSS. It enclosed a report of 3 November, from the OSS representative in Bern, in which the resentment of the Swiss over the bombings was described. General Guisan, it was said, was deeply disturbed, for while he realized that some mistakes were inevitable, he could not understand the occurrence of low-level attacks. The whole OSS task of penetrating Germany was being hindered by the increasing difficulty of obtaining Swiss cooperation.<sup>30</sup>

The pressure brought some results from Eisenhower's headquarters. On 18 November, Strong telegraphed Bradley that acceptance of a permanent Swiss observer was contrary to higher policy. But, for the sake of good relations, arrangements would be made for four Swiss officers to be conducted on a ten-day visit to the VI Army Group only.<sup>31</sup>

The British chiefs of staff agreed to the limited proposal provided the Swiss were not shown secret equipment and it was understood that the visit was not establishing a

precedent. The tour took place without mishap, and in the middle of January 1945 General Guisan wrote Legge a gracious note thanking him for his assistance. He emphasized how instructive it was for the Swiss officers to watch such a well-regulated organization and to sit in on informative conferences.

The case of Swiss military observers was not the only instance in which at least some American officers came to believe that the Swiss were trying to take advantage of the United States. When the Swiss legation expressed concern about an attack on the French power station at Kembs, Colonel Maddux viewed the *démarche* as "tantamount to the assertion of a right to have the Allies refrain from attacking targets in enemy-occupied territory because Swiss citizens have a financial or other interest therein."<sup>32</sup> His blunt reply to the "unwarranted presumption" of the Swiss was diplomatically modified by the Adjutant General's office.

Part of the American irritation and distrust of the Swiss was also caused by Swiss trade with the Axis powers. As a neutral, Switzerland had the right to trade with either camp. Surrounded by German-held territory and traditionally accustomed to trading with their neighbor, the Swiss naturally had extensive dealings with the Germans during the first years of the war. Both their own exports and those that passed through Switzerland from Italy and Spain were important to the German war effort, although it is likely the aid Germany provided Italy was more significant than that Germany obtained from the south.

Though the Swiss had agreed in December 1943 to quotas on the importation and exportation of certain goods and foodstuffs, the progress of the war led the Allies to press for expansion of the controls Switzerland exercised over trade with Germany and transit traffic. Out of fear of German cutbacks on coal shipments to Switzerland if the Swiss



inhibited German coal shipments to Italy, the Swiss had dragged their feet in further negotiations. By the end of July 1944, Cordell Hull found the Swiss attitude "most disturbing" and "strongly believed that we should be ready to consider appropriate retaliatory action now." He wrote:

The delaying tactics the Swiss have employed in this matter are deplored particularly and we are most dissatisfied with Swiss handling of the matter. . . . The Swiss should be warned in strong terms that we will be forced to consider measures at our disposal to prevent the enemy from continuing to receive undue assistance from Swiss railway facilities.

33

If the Swiss did not comply with Allied requests, then the American ambassador in Britain should discuss with the British Ministry of Economic Warfare possible counteractions. "Withholding food quotas is not favored here. Discussions with military as to feasibility of air attacks on key points in the approaches in Germany and Italy to the two main Swiss rail routes should be considered in any case we believe."<sup>34</sup>

The British, however, did not think it wise to give a strong warning to the Swiss without checking with the Air Ministry and the U.S. Fifteenth Air Force, for fear such a warning might coincide with a planned attack and jeopardize the security of the fliers.

By August, Hull was ready to demand that Switzerland suspend all exports to the enemy and prohibit all enemy transit traffic through Switzerland. The British were willing to take such a stand but only with an important reservation. They did not want to take any action that would result in a breach in Swiss diplomatic relations with Germany. If the Germans did break with the small neutral, Switzerland could not act as a protecting power for prisoners of war. The recent murder of captured British airmen in Germany caused London to fear that in the face of defeat the Gestapo might run amuck, killing great numbers of POWs. Therefore, the Brit-

ish would settle for prohibition of export of high priority goods and cessation of transit traffic while allowing the continuation of trade in lower priority exports.<sup>35</sup>

In October the Swiss agreed to end the export of munitions and explosives to Germany, but the issue of transit traffic remained. The Allies were also annoyed by the amount of other valuable material the Ger-



mans were still able to purchase from the Swiss, including railroad switching engines, industrial supplies and machine tools, and two billion kilowatt hours per year of electric power. Undersecretary of War Robert P. Patterson was therefore quick to inform Major General Hull at the Pentagon that Spanish exports to Switzerland were resuming by truck. He recommended that Switzerland not be permitted to make imports across France until she had stopped all war aid to Germany. The undersecretary further suggested that facts regarding the Swiss aid to Germany be brought to the attention of the Supreme Headquarters of the Allied Expeditionary Forces.

Aware that to inform General Eisenhower of the facts of Swiss trade with Germany would be tantamount to directing him to shut off the traffic, Hull recommended that the Joint Chiefs of Staff bring the matter of Spanish-Swiss transit trade to the attention of the State Department. It might be a useful lever.<sup>36</sup>

On 6 November the Swiss chargé d'affaires called at the State Department to complain that all Swiss rail and truck traffic into France had been prohibited by a General Gray, who, he believed, was in charge of U.S. Army transportation in France. The desk officer replied that the matter of Swiss traffic in France was being left in General Eisenhower's hands as an operations matter; given the transportation difficulties that existed, he was not surprised the order had been issued. By implication and innuendo he skillfully left strong doubt in the mind of the Swiss attaché as to whether the State Department was actually behind the order prohibiting Swiss traffic in France. At the same time, he made quite clear that the State Department was very reluctant to interfere with SHAEF operational actions until the matter of Axis transit through Switzerland was satisfactorily settled.<sup>37</sup>

While negotiations dragged on, the trains

moving between Switzerland and Germany and Switzerland and Italy were obvious enough to the pilots patrolling the skies of those regions. As the front moved closer to Germany, violations of Swiss neutrality were increasingly committed by fighter pilots and the tactical forces as well as by the strategic air forces. Many of their intended targets lay narrowly within German borders, thus heightening the probability of bombs falling in Switzerland. The nature of the targets clearly shows the eagerness of the commanders on the scene to slow or halt the shipment of goods and power from Switzerland to Germany.<sup>38</sup>

The United States did not hesitate to deny responsibility for raids where brief investigation could not reveal the involvement of American units. Such was the case for allegations regarding attacks on Cornol 3 December and Niederweningen four days later. There was no accounting for some incidents, despite firm Swiss identification of American insignia. Arnold at one point wrote Donovan to inquire if the OSS knew whether German pilots were attacking Switzerland with captured American planes.<sup>39</sup> Just how thorough the American investigations were may be open to question. They were launched appropriately enough at the highest levels, but the prime interest on the airfields in England and France was the current war, not past history. Then, too, rumors and conversations with ex-pilots suggest that flight logs were not always well kept, in some cases deliberately so.

A severe error in identification occurred on Christmas Day 1944, as planes from the 1st Tactical Air Force bombed Thayngen. The pilots reportedly "were under the impression that they were attacking the Singen railroad bridge located in Germany."<sup>40</sup> Although the day was cloudy, the Swiss felt that the incident demonstrated the insufficiency of the measures the Americans were taking to prevent accidental bombings.



The diplomats of the small country were especially concerned that there be no confusion regarding the regions of Basel near the French and German borders and the Puschlav valley in southeastern Switzerland. As early as September the Swiss minister and attaché called the attention of the War Department to the similarity of terrain in the Basel area and adjoining France; the marshalling yard in Basel should not be mistaken for nearby yards in France and Germany. At Brú시오 in the Puschlav valley there was a highly exposed hydroelectric plant which might appear to be a good target; the Swiss diplomats gave assurance that no electricity went from this plant to Italy.<sup>41</sup>

Despite directions that pilots be carefully briefed on these areas, several complaints were received in January and February 1945 regarding attacks on Brú시오. Responsibility for these was denied, but incidents at Chiasso were another matter. Just over the border from Como, Italy, Chiasso was hit several times, the most notable occasions being on 11 and 27 January.

Meanwhile the German-Italian transit traffic continued. In January 1945 it involved the shipping of more than 7000 tons of clothing, textile materials, and foodstuffs to Germany, while the Italians received more valuable products, including chemicals, some ore and iron, and 53,000 tons of coal—an essential commodity for the war effort of Mussolini's Italian Republic.<sup>42</sup>

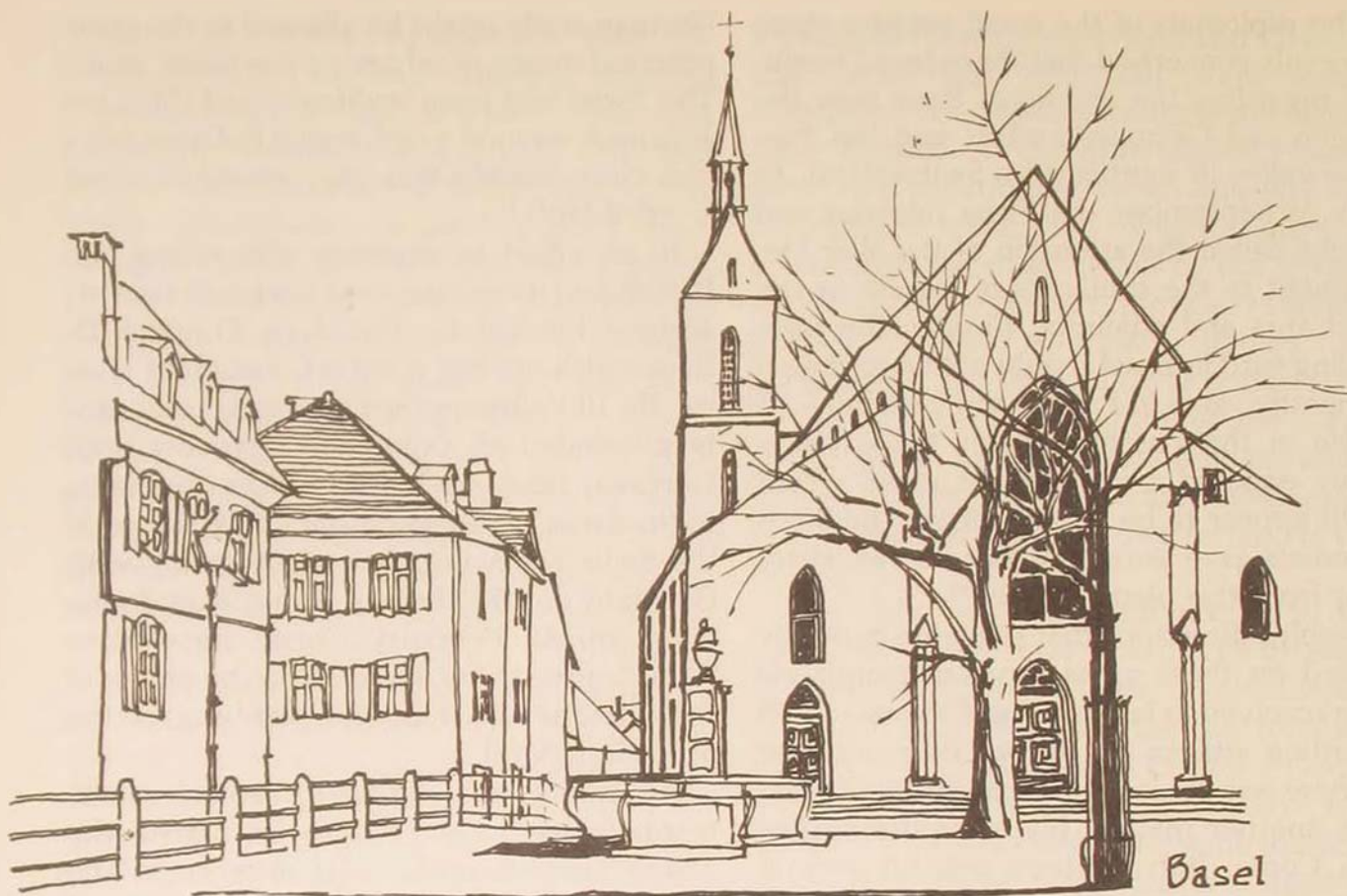
In that month the State Department changed its tactics on the recommendation of the American legation in Switzerland and the British government. For political reasons stemming from Switzerland's neutral position and because of the future potential usefulness of Switzerland in restoring Europe's economy, Acting Secretary of State Joseph C. Grew decided that it would be inadvisable to place "too great" pressure on the Swiss. The position of principle would be abandoned and some concessions on transit and Swiss-

German trade might be allowed as the most practical means of achieving the Allies' goals. The Swiss had been stubborn, and this new approach seemed worth trying to Grew, who was more flexible than the recently retired Cordell Hull.<sup>43</sup>

In an effort to expedite discussions, the British and Americans sent a mission to Switzerland headed by President Franklin D. Roosevelt's special assistant, Laughlin Currie. By 10 February the Swiss had temporarily suspended all exports to Germany until Germany made up her arrears in shipments to the Swiss; there was minimal likelihood of the Swiss renewing their trade treaty with Germany on 15 February. As a gesture to the Swiss, on 22 February Currie traveled to Schaffhausen to lay a wreath on the graves of the citizens killed in the bombing of the preceding April.

His timing could not have been more awkward, for minutes prior to his arrival the Americans had another of their mishaps. The damage caused in Switzerland by the raids of 22 February 1945 was extensive. Seven persons were killed and 16 injured at Taegerwilten and Stein-am-Rhein; eight died at Rafz, as did a child at Vals. A total of 13 separate attacks took place, that at Stein-am-Rhein, 12 miles from Schaffhausen, being the worst. Currie was aghast but managed a public assurance that every possible precaution would be taken to avoid similar accidents in the future. He personally visited the ruins at Stein-am-Rhein and the following day telegraphed a report and his concern in a personal message to the President.<sup>44</sup>

Currie's skill and statements helped to ease tensions, but feelings in Switzerland remained strong. The weather had been excellent, and there seemed to be no acceptable excuse for the errors. Grew expressed his "profound shock" and assured the Swiss of American willingness to pay reparations if the responsibility belonged to the United States.



Promises and payments could not be the only response; something had to be done to prevent further recurrence of such incidents. This was clearly the thinking of General Marshall. On 25 February he sent a personal cable to Eisenhower, expressing the growing concern in Washington over the increasing number of attacks on Switzerland: "everything within our power" should be done to ensure that American pilots were properly briefed and aware of the importance of positive identification.<sup>45</sup>

Eisenhower, too, was disturbed by the frequent mistakes, and the message from Wash-

ington caused him to order that the tactical air forces make no attacks even with good visibility within ten miles of the frontier; under conditions requiring instruments, they should not attack within 50 miles. The 50-mile limit for strategic air forces, save for positively identified targets, was to stay in effect. Yet he felt constrained to reply to Marshall on 28 February that:

Under existing conditions, however, there can be no positive guarantee that such incidents will not occur. Weather conditions are such that air navigation is largely dependent upon dead reckoning except in areas contiguous to



our front lines where navigational aids can be utilized. Our Air Forces are performing thousands of successful missions daily in weather conditions that would normally prevent all flying. We will continue to make every effort to prevent recurrence of these incidents.<sup>46</sup>

So matters stood when four days later, as a result of faulty equipment, bad weather over France and haze in Switzerland, navigational error, and misplaced zeal, six American B-24H bombers dropped 12.5 tons of heavy explosives and 12 tons of incendiaries on Zurich, while more planes dropped 16.5 tons of heavy explosives and five tons of incendiaries on Basel.<sup>47</sup>

Marshall's reaction to the news was strong and immediate, as he ordered Eisenhower to send Spaatz to Switzerland "to clear up bombing mishaps."<sup>48</sup> The Chief of Staff felt a sense of personal responsibility. He undoubtedly knew that the State Department had run out of ways of saying "sorry." Reparation costs were mounting at a steady rate, and important negotiations were being jeopardized. Currie had also telegraphed that the Swiss "have cooperated magnificently" in the negotiations and had agreed to prohibit transit of coal from Germany to Italy; surely some statement was needed to counteract this "most painful impression" created by the bombings.<sup>49</sup>

It was Marshall, rather than the State Department, who decided that a special emissary should apologize to the Swiss. The choice of Spaatz would impress the Swiss and assured Marshall of getting the attention of the Commanding General of Strategic Air Forces, European Theater. Spaatz was capable of doing the job; if he were annoyed at having to do it, then he might take steps to ensure that he would not have to do it again.

Spaatz's irritation was more than passing. He did not like receiving such a curt order. Nor did he wish to leave his headquarters even for a few days when the next weeks would tell whether or not the air war could

drive Germany to her knees. The prosecution of the war had been carried on so intensely in his headquarters that little attention had been paid to the first Schaffhausen incident. It was only with the 22 February affair that significant concern began to mount, and then only because Marshall and others in Washington seemed disturbed.<sup>50</sup>

The feisty General Spaatz did the job, and with a flair. Proper groundwork was done in advance by Harrison and Sam E. Woods, the American Consul General in Switzerland. The latter toured the Zurich site with Legge, privately called on the mayor, and even attended the funeral of several of the victims. The details of Spaatz's trip were left to Harrison and the chief OSS agent in Switzerland, Allen Dulles, who was in charge of travel arrangements. The mission was to be secret, and so it was thought best that the emissaries arrive in civilian clothes. Spaatz journeyed to the small French border town of Annemasse, where he donned ill-fitting civilian garb including a Tyrolean hat, drove across the bridge to Geneva, and there was publicly met by a large Swiss military delegation in full uniform.<sup>51</sup>

Harrison, Spaatz, and his chief of staff, Brigadier General Edward P. Curtis, met with Swiss Foreign Minister Max Petitpierre, Minister of War Karl Kobelt, and Generals Guisan and Rihner the next morning. Following a handsome apology delivered in fluent French by General Curtis, Minister of War Kobelt read a prepared statement listing every violation since 1 April 1944 and bluntly demanded full indemnity and reparation. The session was difficult. Spaatz carefully expressed his regrets and explained the navigational and weather difficulties affecting American fliers. He assured the Swiss that not only had strenuous efforts been made to avoid recurrence since the first Schaffhausen affair but that also new arrangements were being made which he would discuss in detail with the Swiss generals.

Spaatz and Eisenhower knew that the Americans could not go to Bern with the same tired statements about weather, precautions, and positive identification within 50 miles of Switzerland. The 50-mile limit had not worked, nor had the notion of positive identification. On paper they seemed to be satisfactory enough precautions, but practice had proved otherwise. Whether General Spaatz formally acknowledged it or not, in poor weather his pilots often had no more awareness of being within 50 miles of Switzerland than of actually being over the border. At 300 mph ground speed, the difference was only ten minutes of flight time. Although the existing navigational aids were a wondrous improvement over the pure dead reckoning and visual sighting of the first months of the war, these technical achievements were not always free of error or malfunction.

The news Spaatz brought was, therefore, that the zone requiring positive identification of targets would be expanded to stretch 150 miles from the Swiss frontier; within 50 miles of Switzerland no targets of any sort, especially targets of opportunity, were to be bombed even under perfect visibility without Spaatz's personal authorization. Should a target within that area have to be attacked for military reasons, highly experienced crews would be picked for the mission and given special briefings.

These regulations would henceforth hold for all of the Eighth Air Force's activities and for most of the Fifteenth's. The tactical air forces directly under General Eisenhower's command were forbidden to attack any target within ten miles of Switzerland and required to have positive identification of any target in a zone extending 10 to 50 miles from the frontier.

Spaatz withheld discussion of these new bombing restrictions until the civilian ministers had left the room following a magnificent luncheon. He may have felt more at

ease in talking with fellow officers, and certainly he was aware of rumors concerning Kobelt's alleged pro-German leanings. He impressed on Guisan and Rihner the importance of keeping the regulations in strict confidence and warned that if, because of a leak, the Germans should take advantage of the bomb-free zone it might be necessary to order more attacks in that area. The conference ended in cordiality.<sup>52</sup>

Although the trip had gone well, Spaatz detected a faint smell of reprimand in being sent to Switzerland. After his return, he sent long personal letters to Generals Marshall and Arnold in defense of his air war effort. Precautions had been taken previously, and "fortunately, priority targets within one-hundred-fifty miles of Switzerland now number only thirteen, I do not include tactical targets, so that it is now possible to take restrictive action which would have been unacceptable a few months ago." He concluded that "although I feel that the restrictions now in effect are greater than normal prudence would demand, my thought is that the limitation they impose on operations is acceptable at this time."<sup>53</sup>

Arnold knew that his able general was seeking support. He also had to indicate his agreement with Marshall's views. Arnold therefore, like Marshall, sent an appropriate note of thanks. But he also drew on the careful wording proposed by Major General Lawrence S. Kuter in his original draft for the letter: "I am confident that you will maintain the effort necessary to prevent your aggressive but sometimes careless leaders, from poor target identification."<sup>54</sup> He went on to say he "understood and appreciated" Spaatz's part in showing determined leadership and a keen desire to put the Air Forces in the forefront of the war.

Spaatz and Eisenhower were not the only generals in the European Theater of Operations called to account by Marshall. Violations of Switzerland had also been



committed by planes from the Mediterranean Theater. The commander there, Lieutenant General Joseph T. McNarney, was called on to report. He promptly had a special board of officers investigate. Its conclusions were that adequate instructions did exist to prevent air attacks on Swiss territory and that large formations under senior commanders seldom had difficulty in finding the correct targets. The problems arose when small formations peeled off to attack alternative targets in small groups or when individual and less-experienced pilots, unfamiliar with the terrain, shot up Swiss trains and railroad yards.

A number of important targets within 50 miles of Switzerland remained to be attacked. Nevertheless, no strategic air force attacks would be made between the Swiss border and a line from Strasbourg through Reutlingen, Laupheim, and Innsbruck, nor within 40 miles of the southern Swiss border with the exception of Milan and Bergamo without special clearance. Visual means on assigned targets would be required for bombing in the large area south of Frankfurt and Nürnberg to the no-bombing line. McNarney further ordered that crews abandoning aircraft over Switzerland should set them on automatic pilot toward either Germany or the Mediterranean and that great care should be used in jettisoning bomb loads.<sup>55</sup>

A glance at the map shows that a large part of Germany was being given some form of protection by the new limitations, but the course of the war permitted this. The restrictions, joined with the rapid collapse of Germany, did bring an end to the bombing violations of Switzerland except for two minor incidents.<sup>56</sup>

Reparation negotiations progressed only slowly. At first the delay was caused by Swiss requests for American P-51 Mustang fighter planes and the replacement of destroyed leather hides as part of the payment.<sup>57</sup> The

United States did not have sufficient supplies to make the deliveries in kind, and there were other complications in any case. The chief delay, however, was caused by the necessity of determining responsibility for various violations.

For the Swiss, the matter was one of principle. Eventually the U.S. decided that reinvestigation of unresolved cases was not practicable; the damage costs were low, and the headquarters concerned with these incidents had by that time been disbanded and its records stored.<sup>58</sup>

On 21 October 1949 the State Department and the Swiss government agreed on 62,176,433.06 Swiss francs (equivalent to \$14,392,692.82) as full and final settlement of balance and interest due, in addition to the \$4 million already paid, for damage caused to persons and property in Switzerland by all United States armed forces during World War II.

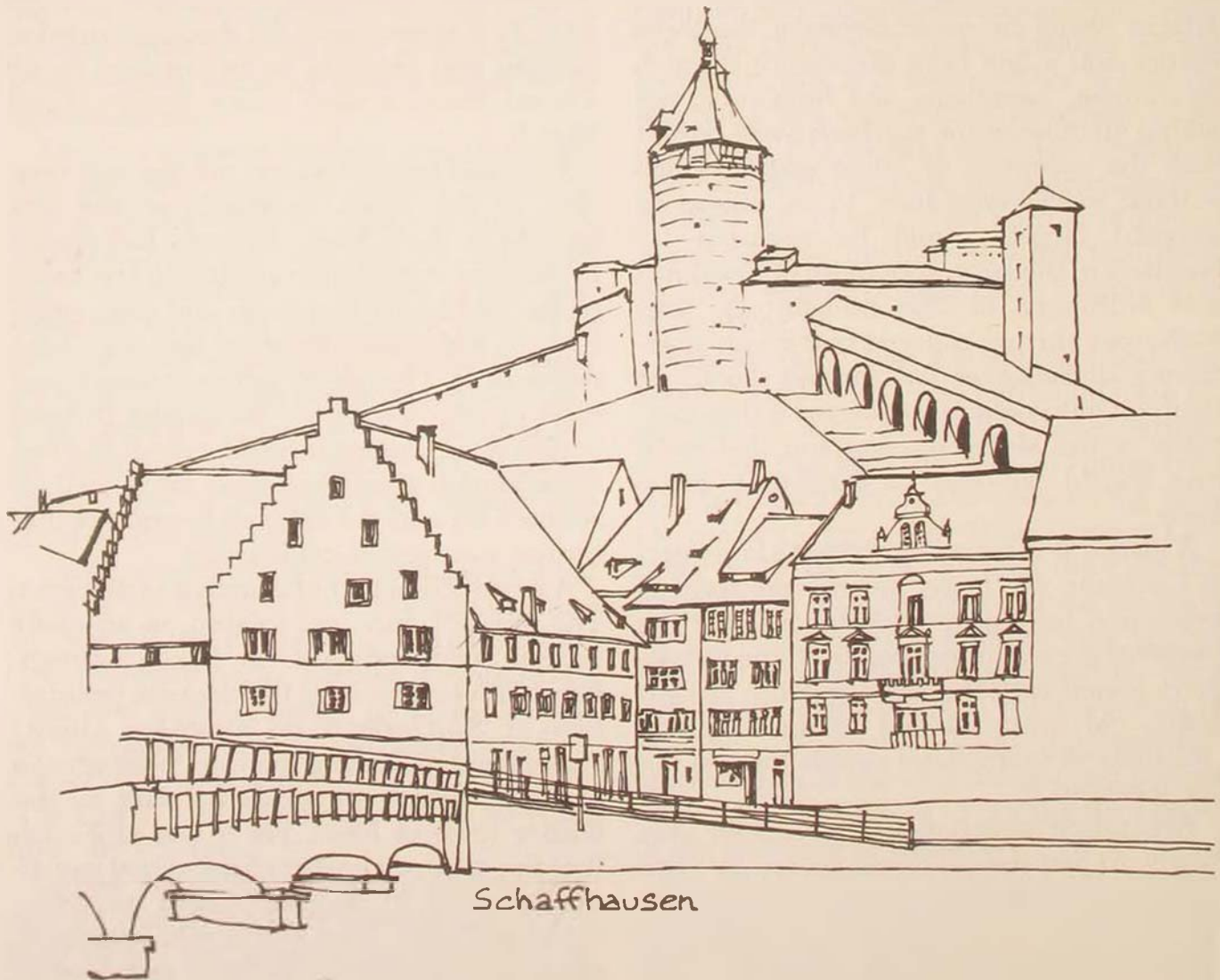
Financial reparation was not the only concern of the Swiss, especially in the first months of 1945. They obviously had reason to demand information regarding the cause of the accidental bombings and solid proof that the individuals involved had been held responsible. The minor border incidents and cases of crippled planes jettisoning defused bombs were understandable; indeed the two Schaffhausen affairs had been fairly well accounted for and the exposed location of that canton was further explanation.

A case such as that of Zurich was different. The city not only was located on an easily recognizable landmark, the Lake of Zurich, but it also represented the deepest penetration of Switzerland by attacking United States bombers during the war. Swiss officials had long feared an accidental raid on the border town of Basel, yet it was at Zurich that the greater number of personnel casualties occurred. If the Swiss asked questions, the State Department would need to demonstrate that the matter had been fully investi-

gated and the individuals concerned held responsible.

Indeed, a court martial was held on 1 June 1945, at the headquarters of the Second Air Division, Eighth Air Force, Horsham St. Faith, England. The presiding officer was Colonel James M. Stewart (who despite his fine war record is more widely known for his acting career). The pilot and the dead-reck-

oning navigator of the plane that had led a makeshift squadron over Zurich were charged with violation of the 96th Article of War: they had "wrongfully and negligently caused bombs to be dropped in friendly territory" and had negligently and incorrectly determined the location of the aircraft. Considerable evidence was presented regarding equipment malfunction, poor visibility, er-





rors of judgment, and the zeal with which attack crews were necessarily imbued. The fliers were acquitted of any criminal intent.<sup>59</sup>

THE STORY of the bombings of Switzerland is one more reminder of the desperate nature of the total struggle then occurring. The ramifications of that war and the tensions it produced were far reaching. Conflict between State Department and Pentagon, between general headquarters and field command, between Army intelligence and OSS was not unusual. The same could be said of tension between the desire to prosecute the war fully and the need to treat lightly with neutrals harboring downed fliers and shipping goods to the enemy, between the aggressive zeal of pilots and the fine lines of regulations easily obscured by the clouds of both climate and war. The peculiar relations of the United States and Switzerland provide a microcosm that sets these problems in especially sharp focus.

The question may well be asked why the violations of Swiss neutrality did not receive much publicity in the United States. Many of the bombings were given extensive coverage in the Swiss press, and certainly American reporters had access to these accounts. Probably in the news of the day, the Swiss events seemed of minor significance. The official history, *The Army Air Forces in World War II*, contains only a sparse account of the embarrassing episode, and the individuals involved have for the most part been reticent about discussing their experience.<sup>60</sup> It should not be implied, however, that this low profile was the result of a cover-up. During World War II, United States bombing practices simply were not subject to the close public review

and criticism that has almost become standard since the height of the Vietnam war.

In recent years, some spokesmen have suggested that events in Vietnam represented the first occasions when the United States bombed neutral targets. This was not so. The more important issue is one of intent. The Cambodian incursion was a deliberately planned campaign. Not so with the Swiss bombings. To the extent there is demonstrable evidence, these were accidents. Accidents do happen, although they do not necessarily occur accidentally. Many of the crews that committed violations displayed unusual skill, initiative, and aggressiveness. Without these highly esteemed attributes, they might have aborted their missions before entering into serious error. In acting beyond the call of duty, some men win a medal of honor; others receive a court martial.

The war was made up of men. As such, conflicts regarding policy and procedure were bound to arise. The intent of high command to avoid violations of Switzerland is clear. The attitude of the on-the-scene generals was less concerned. Yet where there was personal contact, there was more sympathy for the Swiss position. The attitudes of Spaatz and Curtis and their suspicion of the German proclivities of the Swiss were altered as a result of their visit with the Swiss generals. Throughout the war Legge, Harrison, and Currie strongly supported the Swiss both out of diplomatic necessity and out of their own personal horror at the events. Marshall did not have the benefit of such contact, yet he exercised the most balanced leadership. In the Swiss affair, as in so many events of the period, his character stands forth.

*Allegheny College*

#### Notes

1 For example, investigations showed British responsibility for minor attacks on Geneva, Basel, and Zurich in 1940. There was controversy over

incidents at Samedan on 1 October 1943 and at Coblenz, across the Rhine from Waldshut, Germany, on 16 February 1944. Because British planes

were involved in violations of Swiss airspace during these periods. U.S. representatives initially blamed the British. Eventually the U.S. accepted responsibility for the Samedan incident, but that for the Coblenz affair was still undecided several months after the European War was over; at that time the Swiss submitted a map charting the path taken over Switzerland by an American Thunderbolt which allegedly attacked Coblenz at 2:45 p.m.

2. Department of State Records, National Archives (hereafter cited as DS), 740.0011 European War 1939/33139, Legge and Harrison to War Dept., 9 Feb. 1944. Modern Military Records Division, National Archives, Records of War Department General and Special Staffs (hereafter cited as MMR, WDGS), OSW 360.112 Switzerland, précis of Hull note to Stimson, 15 March 1944.

3. *Foreign Relations of the United States: Diplomatic Papers* (Washington, D.C.: U.S. Government Printing Office) (hereafter cited as *FR*), 1944, IV, no. 2020, Harrison to Hull, 1 April 1944, p. 792.

4. DS, 411.54 Bombing (hereafter cited as Bombing), Jck. 1, Harrison to Hull, 1 April 1944.

5. Arnold papers, Library of Congress, Box 190, Spaatz to Arnold, 1 April 1944, plus attached notes by Lt. Gen. B. M. Giles and Arnold. DS, Bombing, Jck. 1, 740.0011 European War 1939/4-2244, Legge report 14 April 1944; 740.0011 European War 1939/34-24, Culbertson to Hull, 10 April 1944.

6. DS, Bombing, Jck. 1, 740.0011 European War 1939/33785, Harrison to Hull, 2 April 1944.

7. *FR*, 1944, IV, no. 2086, Harrison to Hull, 4 April 1944, pp. 793-94.

8. *Ibid.* and DS, Bombing, Jck. 2, 740.0011 European War 1939/33794, Harrison to Hull, 3 April 1944; the translations are Harrison's.

9. *FR*, 1944, IV, Hull to Harrison, 5 April 1944, p. 795.

10. DS, Bombing, Jck. 1, 740.0011 European War 1939/33837, Harrison to Hull, 5 April 1944.

11. By 20 April the death toll was 39, with 33 persons still hospitalized, 12 of whom were seriously injured. There were 428 homeless persons, including 102 families; 67 buildings had been damaged. Sixteen persons had been killed at the railway station, and one bomb at the city administrative offices killed ten, including a member of the town government and a cantonal judge. Valuable treasures had been destroyed at the Museum of Natural History and at the Allerheiligen Museum, where nine works of Tobias Stimmer and the collection of Swiss painters of the seventeenth and eighteenth centuries were burned.—DS, Bombing, Jck. 2, 740.0011 European War/4-2044, Harrison to Hull, 20 April 1944.

12. *Ibid.*

13. Washington National Records Center at Suitland, Maryland, Record Group 18; report of operations 1 April 1944 to Arnold from Hq Eighth Air Force (24 June 1944) including: lead bombardier's narrative, 44th Bombardment Group, mission of 1 April 1944 (2 April 1944); A-3 narrative of operations, 44th Bombardment Group, mission of 1 April 1944 (2 April 1944); command pilot's narrative, and lead navigator's report, 392d Bombardment Group, Mission of 1 April 1944 (3 April 1944). See also MMR, WDGS, OPD 336 Switzerland I, Spaatz to Arnold, 2 April 1944.

14. *FR*, 1944, IV, Hull to Charles Bruggman (Swiss minister in Washington), 25 April 1944.

15. On 24 April, 100 bombers had flown over the Schaffhausen area; 12 damaged bombers had landed in the country, another crashed at Baltenwil, and still another was shot down by the Swiss over Greifensee. Two planes were forced down at Dübendorf, and two more made emergency landings.—MR, WDGS, OPD 336 Switzerland I-A, copy of Dept. of State memorandum of conversation among Bruggman, Culbertson, and MacArthur.

16. DS, 740.0011 European War 1939/34724C, Hull to Harrison, 30 May 1944.

17. DS, Bombing, Jck. 1, 740.0011 European War 1939/735, Hull to Bruggman, 1 June 1944; *ibid.*, 740.0011 European War 1939/7-844, G. H. Shaw to H. D. Smith, 8 July 1944.

18. MMR, WDGS, OPD 336 Switzerland I-A, Bonbright to Maddux, 26 July 1944.

19. Author's interview with Gen. Edward P. Curtis, 19 Feb. 1972.

20. MMR, WDGS, OPD 336 Switzerland I-A, memorandum for record of Maddux telephone conversation with Culbertson, 13 June 1944.

21. *Ibid.*, memorandum for record, 18 June 1944. In September the Swiss charged that on the fifth American pursuit planes attacked two Swiss planes escorting U.S. bombers to fields near Dübendorf, resulting in the death of one Swiss pilot and the wounding of another. On 8 September the railway stations of Delémont and Moutier were attacked and trains strafed; moving trains were strafed on 9 September near Rafz and Weiach/Kaiserstuhl. September 10 saw steady violations and the attack by a Mustang on two Swiss pursuit planes. The Zurich-Basel express was reportedly strafed on 11 September.—MMR, Air Force Central File, Attacks and Raids 384.5B, Hodges to Arnold, 12 Sept. 1944.

22. DS, Bombing, Jck. 1, 811.2354/9-1344, Hull to Stimson, 15 Sept. 1944.

23. MMR, WDGS, OCS 091 Switzerland, Stimson to Hull, 25 Sept. 1944.

24. *Ibid.*, memorandum by Gen. Hull, 10 Oct. 1944.

25. *Ibid.*, OPD 336 Switzerland I-A, Stimson to Hull, 12 Oct. 1944.

26. *Ibid.*, OPD 336 Switzerland II, Strong to Chief of Staff, 4 Oct. 1944.

27. *Ibid.*, Harrison to Hull, 12 Oct. 1944.

28. *Ibid.*, Handy memorandum for Arnold, 19 Oct. 1944.

29. *Ibid.*, SHAEF 091/1 Switzerland I, Legge to Smith, 9 Nov. 1944.

30. *Ibid.*, Bradley to Smith, 10 Nov. 1944, and Arnold papers, Library of Congress, Box 44, Donovan to Arnold, 10 Nov. 1944.

31. MMR, WDGS, SHAEF 901/1 Switzerland I, Strong to Bradley, 18 Nov. 1944.

32. *Ibid.*, OPD 336 Switzerland II, Maddux to Commanding General, Army Service Forces, 14 Nov. 1944.

33. *FR*, 1944, IV, Hull to Winant, 26 July 1944, pp. 751-52.

34. *Ibid.*

35. *Ibid.*, Winant to Hull, 2 Sept. 1944, pp. 764-65.

36. MMR, WDGS, OPD Switzerland II-A, summary by Gen. Hull, 21 Oct. 1944.

37. *FR*, 1944, IV, memorandum of Wallner conversation with Feer, 6 Nov. 1944, pp. 781-82.

38. On 29 October several planes attacked the railway station at Noirmont. The attack was attributed to a mistake in border identification, despite the presence of Swiss flags painted on four of the village roofs. Sometimes the violations were the result of near misses on legitimate targets. Such was the case for the raids of 9 November which embarrassed Legge in his negotiations regarding Swiss observers and the Rhine control. At Diessenhofen, U.S. units were attempting to bomb the German end of the bridge over the Rhine. Near Eglisau the attack was on a power dam; an error in bombing technique caused the bombs to fall wide, striking near the Swiss bridge over the River Glatt.—DS, Bombing, Jck. 1, 811.2354/12-1644FIS, Stettinius to Bruggman, 22 Dec. 1944.

39. DS, Bombing, Jck. 2, 811.2354/2944, Stettinius to Bruggman, 19 Feb. 1945. Arnold papers, Box 44, Arnold to Donovan, 12 Nov. 1944.

40. MMR, WDGS, OPD 336 Switzerland III, memorandum by Col. D. Divine II, 26 Jan. 1945.

41. DS, Bombing, Jck. 1, Maddux memorandum to Dept. of State, 10 Sept. 1944. MMR, WDGS, OPD 336 Switzerland II, Maddux to Culbertson, 29 Nov. 1944.

42. DS, 740.00112 European War 1939/2-845CS EG, Huddle to Grew, 8 Feb. 1945.

43. *FR*, 1945, V, Grew to Crowley, 15 Jan. 1945, pp. 770-71.

44. DS, 740.0011 European War 1939/2-2345, Harrison to Grew encloses Currie note, 23 Feb. 1945. Other towns hit on 22 Feb. were Neiderdorf, Lohn, Beringen, Neuhausen, Hundwil, Otelfingen, Igis, and Zizers, as well as a train running between Neunkirch and Schaffhausen.—MMR, WDGS, Eighth Air Force Target Summary, 17 August 1942-8 May 1945.

45. MMR, WDGS, OPD 353.4TS I, Gen. Hull (for Marshall) to SHAEF, 25 Feb. 1945.

46. *Ibid.*, SHAEF 373.5 Switzerland I, Eisenhower to Marshall, 28 Feb. 1945.

47. MMR, WDGS, Eighth Air Force Target Summary, 17 August 1942-8 May 1945. In Basel, bombs landed in the main freight station, causing much damage; seven persons were injured. At Zurich, 23 bombs exploded in an open field. Two houses were directly hit, while others were severely damaged; about 22 persons were rendered homeless. Five people were killed and 12 more required hospitalization.—DS, 411.54 Bombing, Jck. 2, 740.0011 European War 1939/3-745, Lehrs to Grew, 7 March 1945.

48. MMR, WDGS, SHAEF 373.5 Switzerland I, Marshall to Eisenhower, 5 March 1944.

49. DS, 470.00112 European War 1939/3-545, Harrison to Marshall enclosing Currie message for Marshall, 5 March 1945. Currie's reaction, as well as those of others, indicates the inaccuracy of persistent rumors in Switzerland that the American bombings were not accidental but rather heavy-handed efforts by the U.S. to force Swiss compliance in the Currie negotiations.

50. Interview with Gen. Curtis, 19 Feb. 1972.

51. DS, Bombing, Jck. 2, 740.0011 European War 1939/3-945, Woods to Grew, 9 March 1945. Interview with Gen. Curtis, 19 Feb. 1972.

52. MMR, WDGS, OPD 353.4TS I, Spaatz to Marshall, 10 March 1945. Interview with Gen. Curtis, 19 Feb. 1972.

53. MMR, WDGS, OPD 336TS I, Spaatz to Marshall, 13 March 1945.

54. Arnold papers, Box 49, Arnold to Spaatz, 26 March 1945, and attached memoranda.

55. MMR, WDGS, OPD 353.4TS I, McNarney to Marshall, 13 March 1945.

56. On 8 April six bombs were dropped on Münster, shattering stained



glass windows in the church and cloister. Brúisio was also bombed on 26 April.

57. Arnold papers, Box 130, SAS 452.1 Switzerland, Spaatz to Arnold, 11 March 1945; Giles to Spaatz, 23 March 1945; Eaker to Legge, 10 Sept. 1945. DS, Bombing, Jct. 2, 740.00112 Navicerts/7-1345, Grew to Stimson, 17 July 1945; MMR, WDGS, OCS 091 (44-45), Stimson to Grew, 3 Aug. 1945.

58. The U.S. denied connection with incidents at Brúisio on 30 January and 23 February 1945 but admitted possible guilt for an attack on 26 April. The War Department would not pay for damage to the Thur River bridge between Felben and Pfyn and rejected responsibility for certain attacks at Maggio, Chiasso, and Coblenz. There was much debate over incidents at Solenzara (Sassano) and Ponte.—DS, Bombing, Jct. 2, 740.0011 European War 1939 B-2145, Reid to Culbertson, 21 Sept. 1945. MMR, WDGS, OPD 42-45, 336 Switzerland III, Christenberry to Adjutant General, 25 Oct. 1945.

59. Washington National Records Center, Suitland, Maryland, Record of trial of Lt. William R. Sincock by general court martial, Horsham St. Faith, England, 1-2 June 1945.

60. Wesley F. Craven and James L. Cate, editors, *The Army Air Forces in World War II*, 7 volumes (Chicago: University of Chicago Press, 1948-58), III, 307, 735-36.

#### Author's Acknowledgment

Much of the article is derived from interviews and correspondence with various persons. I especially wish to express appreciation for the assistance of General Edward P. Curtis and of the late Dr. William R. Sincock, who initially urged me to explore this topic. Gratitude is also extended to Allegheny College and the Ford Foundation for grants facilitating this research.

We (that's my ship and I) took off rather suddenly. We had a report somewhere around 4 o'clock in the afternoon before that the weather would be fine, so we thought we would try it.

I saw a fleet of fishing boats . . . . I flew down almost touching the craft and yelled at them, asking if I was on the right road to Ireland.

They just stared. Maybe they didn't hear me. Maybe I didn't hear them. Or maybe they thought I was just a crazy fool. An hour later I saw land.

*Lindbergh's Own Story  
[of his non-stop flight, Long Island to Paris],  
in the New York Times May 23, 1927*

# JSTPS

## *The Link between Strategy and Execution*

MAJOR GENERAL  
JEROME F. O'MALLEY





*The very existence of an integrated nuclear team has lent enormous weight and credibility to our deterrent to aggression . . . virtually with the stroke of a pen, the nation's nuclear striking power has been strengthened immeasurably.*

General Thomas S. Power  
Commander in Chief, SAC  
and Director of Strategic  
Target Planning, 1964

THE “integrated nuclear team” referred to by General Power is the Joint Strategic Target Planning Staff (JSTPS) conceived in the late 1950s, brought into being in 1960, and which from that day to this, has been the nuclear general war planner for all United States forces. Comprised of 340 highly talented men and women from all services, this unique organization converts broad national strategy into the detailed plan that forms the framework of our deterrent. This plan—the Single Integrated Operational Plan (SIOP)—integrates and coordinates the forces committed by the nuclear Commanders in Chief (CINC). Because this plan is based on the actual capabilities of forces in being, it measurably increases the credibility of the U.S. deterrent as perceived by our adversaries as well as our allies.

The SIOP, as with any plan, reflects the thrust and flavor of the strategy on which it is based. The national strategy in the years following World War II was based on the lessons learned during that war. Conditioned by several years of world war and possession of a nuclear monopoly, the U.S. strategy was to threaten massive retaliation as the ultimate deterrent against any nuclear aggressor. That strategy served the U.S. interest well; it acted as an effective deterrent to large-scale nuclear or conventional attacks on the U.S. and its allies.

Our nuclear plan at that time mirrored the

relative simplicity of this strategy. With only a few hundred delivery vehicles and a small arsenal of nuclear weapons, the plan consisted of a small number of options employing our total nuclear force, designed to be exercised at the general war level. Because a single unit within the Air Force, the Strategic Air Command (SAC), maintained and operated all U.S. strategic delivery vehicles, nuclear war planning was almost entirely a SAC task.

### Initial Nuclear Planning

Planning for the few nuclear-equipped theater forces was the responsibility of the appropriate theater commander, and all such plans were coordinated yearly at a planning conference. Changes to the plans during these years were evolutionary. The growth in the U.S. capability was arithmetic, and planning was a comparatively simple process carried out primarily by a small number of personnel at SAC Headquarters, Offutt AFB, Omaha, Nebraska.

#### *early planning problems*

The process, however, had several potential limitations that would be amplified by events underway in the late 1950s, as it became increasingly apparent that the Soviet Union was developing a meaningful nuclear deliv-

ery capability. In the face of this growing threat, it became evident that the process of nuclear war planning would have to undergo fundamental changes.

The size and the power of our nuclear arsenal were also increasing. The global capability of the air-refueled B-52 and the introduction of the intercontinental ballistic missile (ICBM) and submarine-launched ballistic missile (SLBM) added significant new capabilities to our strategic inventory, and new air and ground nuclear delivery potential made for increased breadth and planning complexities. Plans capitalizing on the different qualities of these new weapon systems could not be handled by a simple expansion of existing practices. The complexities of applying the major force of three separate Triad elements—tactical aircraft and tactical atomic missiles and artillery—in an optimal manner required new skills and an increasing reliance on automation.

Another element emerged about the same time; the NATO alliance, formed earlier, was seeking a greater voice in the determination of the defense of Europe. Some, however, feared that nuclear proliferation might waste valuable economic resources of our allies and “uncork the nuclear genie.”

Differentiating between theater and strategic targets also created problems that were difficult to work out at “after-the-fact” planning conferences. These factors were all working to strain the capabilities of the planning mechanism of that time. It became obvious that the planning would have to increase in sophistication and complexity to cope with these rapidly unfolding developments.

#### *the nuclear team*

According to General Power, SAC Commander in Chief at the time, several approaches were suggested to cope with this increasing complexity. These proposals

ranged from a revision of the “. . . existing coordination procedures to establishment of a ‘United States Strategic Command . . .’” which would “. . . incorporate all forces possessing a nuclear strategic capability . . .”<sup>1</sup> and provide plans for the employment of those forces. The decision was made by then Secretary of Defense Thomas Gates. Calling it “. . . the most important decision I have participated in since I have been in the Pentagon,”<sup>2</sup> he established the Joint Strategic Target Planning Staff, a single multiservice nuclear war planning agency.

Under this concept, each nuclear CINC “commits” forces to the JSTPS which, in accordance with guidance from the Joint Chiefs of Staff (JCS), develops detailed plans to employ these nuclear forces in a much more efficient manner than was previously possible.

Our NATO allies are represented in the JSTPS, where the NATO nuclear war plan is coordinated with the SIOP. Inputs to the JSTPS—JCS guidance, CINC committed nuclear forces, and detailed intelligence data—are melded into a plan that applies available forces against the most critical strategic targets for varying levels of readiness and circumstances of hostility. In concept, this seems a straightforward and relatively simple task. Yet, it is an amazingly intricate process, providing for the application of thousands of weapons to widely dispersed targets, timing of the arrival of each of these weapons with a tolerance measured in seconds, and a capacity for the plan to be executed under any condition of warning or attack.

*Guidance.* The first ingredient necessary to the SIOP construction process, the JCS guidance, is necessarily broad in nature. This characteristic allows a wide latitude to JSTPS planners during the initial planning phases. To ensure that, as the planning becomes more detailed, it remains in consonance with this guidance, the SIOP is briefed at specified



intervals to the JCS. A constant, present in U.S. nuclear strategy since World War II, has been the primary goal of deterring a nuclear attack. Yet it was evident even at the beginning of the atomic age that there was no adequate direct defense against a well-armed and determined enemy. Even a defense that is 99 percent effective—an unattainable feat—would still allow some enemy delivery vehicles to penetrate borders, each possessing a capability for great destruction.

The goal of deterrence, given those circumstances, is one of making attack unattractive to a prospective aggressor. The most effective method of attaining that goal is to ensure a capability for counterattack of sufficient size and force to negate any possible advantage an enemy perceives in his attack. The capability of a sufficient portion of our strategic forces to ride out a surprise attack and still inflict unacceptable damage on an aggressor has been the foundation of our deterrent throughout the nuclear age. Secretary of Defense Robert S. McNamara stated the goal of this assured destruction, as being able “. . . to ensure the destruction, singly or in combination, of the Soviet Union, Communist China, and the Communist Satellites as national societies.”<sup>3</sup>

*Forces.* Fundamental to an understanding of the work of the JSTPS is the recognition that its product is a true, actual *operational plan* . . . based on extant, operational weapon systems in the hands of in-being operational forces. The SIOP's work is with actual forces, actual targets, actual planning tools; it is not futuristic, not theoretical, not of a “requirements” nature. This point must be borne in mind.

The forces committed by each nuclear CINC provide the second ingredient that helps form the SIOP. Because SAC is a global command, its allocation of available nuclear forces is almost total. Commitment from the other CINCs is based on characteristics and availability of their possessed forces and the-

ater responsibilities. Each CINC, at the time he commits these forces, provides a quantitative estimate of their capabilities.

*Intelligence data.* The third ingredient for planning, after JCS guidance and the nuclear forces commitment, is intelligence data. Highly classified intelligence from all sources is made available to the JSTPS. It is evaluated, and potential targets are sorted according to their suitability and priority in fulfilling national objectives. These three inputs—national guidance, nuclear forces, intelligence—are then melded, and from them flows a single output, the SIOP, the single integrated plan for strategic employment of U.S. forces in nuclear conflict.

#### *organization*

The organization of the JSTPS is arranged along functional lines. (See Figure 1.) At the top of the structure is the Director of Strategic Target Planning. The present Director, General Russell E. Dougherty, was appointed to the position on his assumption of the command of SAC, as have all CINCSACs since 1960. The Deputy Director has, by tradition, been a Navy Vice Admiral. Supporting the Director and Deputy, the Joint Secretariat performs an executive function and presides over the myriad administrative details attendant in a large-scale planning operation.

Senior officers from the Supreme Allied Commands and the Unified and Specified Commands are assigned to the JSTPS to provide an interface between the planning agency and the executing commands. Within North Atlantic Treaty Organization (NATO), Supreme Allied Commander, Europe (SAC-EUR) is designated as the NATO nuclear targeting coordinating authority; thus, these representatives ensure a high level of coordination between the NATO nuclear forces assigned to the international commanders: Supreme Allied Commander, Atlantic (SA-

CLant), SACEUR, and the U.S. nuclear-equipped forces of Commander in Chief, Atlantic (CINCLant), Commander in Chief, Pacific (CINCPAC), U.S. Commander in Chief, Europe (CINCEUR), and CINCSAC. The U.S. Army, Navy, Marine, and Air Force personnel assigned to the JSTPS work in two divisions, the National Strategic Target List (NSTL) Division, and the SIOP Division. The NSTL Division translates the national guidance into specific targeting guidelines used by the SIOP Division to assign individual weapons to designated targets.

### Building the SIOP

The first step in any military planning exercise is an analysis of intelligence data. In building the SIOP, this step is distinguished by the depth of the analysis and the thoroughness in the examination of each potential target. Information from all civil and military intelligence sources flows into the JSTPS and is evaluated in order to identify those targets that best satisfy national targeting guidance.

### *evaluating intelligence*

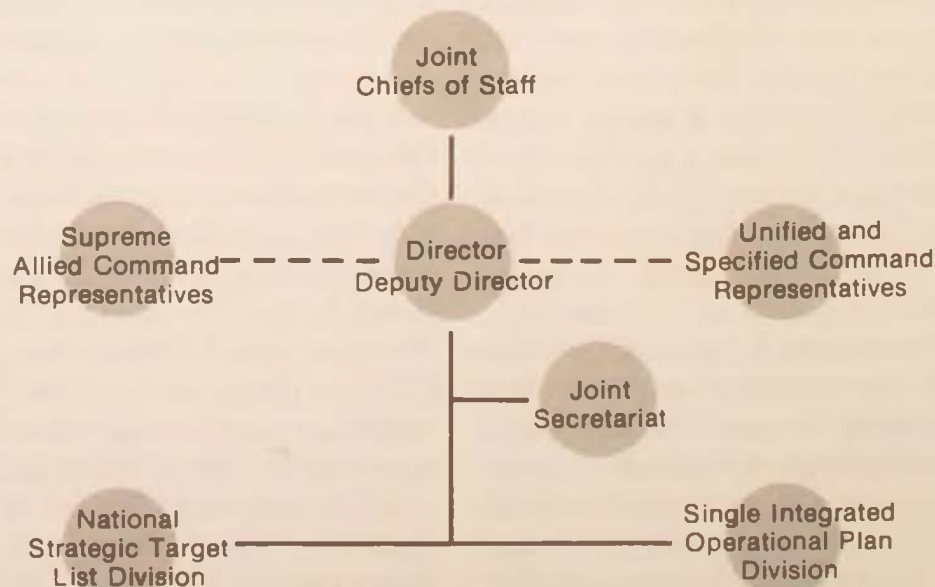
When all intelligence data are located, identified and evaluated, an accurate picture of the total target structure is compiled by NSTL analysts. The listing and description of each target comprises the National Target Base (NTB). It is from this list that suitable targets are selected for weapons application, at a later point in the SIOP-building process.

### *selecting the aim points*

The emphasis at this step is to select each aim point in a manner that will satisfy the targeting objectives with an optimum economy of effort. Factors peculiar to an installation considered include location, altitude, type of construction, distance from other installations, and terrain. These characteristics provide a starting point in selecting a weapon (for example, if the installation is hardened to resist blast effects, a weapon with larger yield or better accuracy must be selected).

The proper height of burst (HOB) for the weapon must be planned so that the combination of accuracy, aim point, yield, and

Figure 1. Organization of the Joint Strategic Target Planning Staff





HOB can produce the required level of damage to the target without producing unwanted collateral effects on other nearby installations. Computers are used to model the effects of a weapon at various aim points. The damage that could be inflicted on the target installation is calculated for each aim point, and the optimum aim point is selected.

The aim point is referred to as a Desired Ground Zero (DGZ). If, for any reason, the factors which affected the construction of a DGZ are changed, such as weapon yield or HOB, the entire process of reoptimizing weapon effects on the DGZ may have to be repeated. Thus, the iterative process of matching installations and weapons begins to shape the SIOP. Each successive step in developing the SIOP is a refinement of the previous work. For example, the selection of individual delivery vehicles and the actual numbers of each weapon available are ignored in early DGZ construction efforts. If conflicts in actual weapons application develop later, adjustments in earlier work may be required. This use of an iterative methodology ensures integration of each element of the task in a systematic, properly sequential manner.

#### *determining damage expectancy goals*

When Desired Ground Zeros have been constructed for the appropriate installations in the National Target Base, the DGZs are entered in the National DGZ List. An initial allocation of available weapons is made against the DGZs to maximize target value destroyed. The allocation is analyzed to see how well the Damage Expectancy (DE) requirements in the employment guidance have been met. If the requirements are not met, the allocation is revised. When the DE and target coverage requirements in all areas are met, the weapons allocation is documented as the DE goals. They serve as

a guideline during force application by the SIOP Division.

#### *applying the force*

Where the NSTL Division analyzes overall weapons against overall targets in the allocation process, the SIOP Division is concerned with each delivery vehicle during force application. SIOP Division missile and aircraft application teams actually plan a delivery vehicle/weapon combination for each DGZ. For this task, the teams use the forces committed to the SIOP by the Unified and Specified Commanders and the JCS-approved planning factors, such as weapon system reliability or prelaunch survivability.

Using intelligence data and maps, the application teams study possible attack routes for each DGZ. The aircraft team selects tankers for each bomber in order to provide necessary bomber range. Computer programs are used to simulate the route of each bomber and model the defenses along the route. Routes are adjusted and re-evaluated until an acceptable probability of arrival is achieved.

Using ballistic missile trajectory models, the missile team applies ICBMs and SLBMs to ensure that target assignment is compatible with missile range and footprint\* capabilities. The missile team also selects specific ICBMs for appropriate DGZs and determines if penetration aides (such as chaff or decoys) will be required.

After each sortie has been planned for every option, the entire force must be timed. Force timing meshes the entire effort, to preclude intersortie conflicts and to phase the attack, particularly in dense target areas. If conflicts between different delivery vehicles cannot be resolved, the weapon assignments or attack routes must be reaccomplished. When all timing conflicts have been re-

\*Footprint: that area to which a multi-warhead missile can deliver warheads. Footprint is normally described as an elliptical figure with cross range and down range dimensions in nautical miles.

solved, a painstaking re-evaluation is made of all sortie assignments and timing plans. Only after all the data are verified are the plans ready to be reproduced and distributed to the individual aircraft, ICBM, and submarine crew.

#### *coordination*

The ultimate product of this effort is the Single Integrated Operational Plan—a plan that assigns forces, targets, and times and coordinates the entire U.S. strategic arsenal.

The capability of each CINC to fulfill his portion of the plan is assured through interaction at regular intervals throughout the planning process. The NATO nuclear plans are also coordinated with the SIOP. Routine planning problems are resolved within the JSTPS—by the Director if necessary—and each is briefed at the next update to the JCS and the CINCs.

### The Call for Flexibility

A common perception throughout the 1960s was that most U.S. strategic weapons were targeted indiscriminately and mainly against urban population in cities and industrial areas. In fact, during this period large numbers of available weapons were assigned to targets of a direct military nature, giving these weapons a prime countermilitary role. Thus when it became known that increased flexibility would be attained by emphasis on improved targeting of an enemy's military forces, many mistakenly perceived this emphasis a "switch" or "shift" in targeting philosophy.<sup>4</sup>

In actuality, it was the call for exploiting the flexibility of our weapon systems and for a larger number of available options in the use of our strategic forces that provided the basis for the new flexibility. This desire for a wider array of available choices is not a re-

cent phenomenon. Four presidents have publicly stated a desire to have additional nuclear force options covering the gap between nuclear "nothing" and "all." The Senate Armed Services Subcommittee on Preparedness in 1968 worded the requirement as having the "... capability and flexibility to respond so that no matter how the war is initiated, we will be in a position to assure the termination of hostilities under conditions which are relatively favorable to us."<sup>5</sup>

It was not, however, until the 1970s that the generally worded call for flexibility in the planning and the plans for employing our nuclear strategic forces began to assume specific meaning. Secretary of Defense Schlesinger spelled out the need for preplanning for the possible use of a "... series of measured responses which bear some relation to the provocation; have prospects of terminating hostilities before general nuclear war breaks out and leave some possibility for restoring deterrence."<sup>6</sup>

#### *implementing the new guidance*

The new nuclear policy emphasis taking shape during this period retained the basic features of the planning policy in being—while adding some new ones and altering others. There is no plan for a disarming first strike; there is no national policy requirement, nor do we field the capability for such a strike. The reasons underlying this absence of a first-strike plan reflect both military capability and national policy-making. In his FY 1977 Annual Defense Department Report, Secretary of Defense Donald H. Rumsfeld expressed the policy in these words:

This degree of flexibility ... necessarily includes the option and the capability to strike accurately at military targets, including some hardened sites. But it does not permit, and our programs do not aim to acquire, a disarming first strike capability against the USSR. Such an



objective is not even attainable at present because the Soviets themselves maintain a TRIAD of offensive forces—along with massive active strategic defense—that preclude a successful simultaneous attack on all three forces.<sup>7</sup>

Retained in the new strategy was the fundamental reliance on achieving a high degree of assured destruction on primary targets as the ultimate deterrent to full-scale attack and as a deterrent necessity to limit escalation. Recognizing that neither the U.S. nor the U.S.S.R. has sufficient weapons for a disarming first strike, our planners concentrate targeting emphasis on those installations and facilities that are key to the viability of a nation to support conflict or recover aggressive capabilities as well as those forces and capabilities that can damage our nation and our allies. The intent is to ensure that the U.S. and its allies are not left in an inferior position following any nuclear strike, no matter how aggressive or devastating an attack we may have experienced.

New options were added that furnished more finely graduated, preplanned nuclear responses against a variety of meaningful targets at intermediate levels of conflict. While the SIOP retained the ultimate large-scale nuclear options, it now includes an increased number of lesser options that were integrated into our overall planning for the use of U.S. nuclear forces. SACEUR and SACLant also have comparable, coordinated plans for forces under their command—in accordance with NATO nuclear planning precepts.

The alternative of committing or withholding certain categories of weapons and targets was designed into each of these lesser options for the intended purpose of controlling lesser hostilities within well-defined limits.

This new planning exploited the flexibility of our systems without compromising the ultimate levels of preplanned attacks and thereby provided a credible response—where specifically formulated planning had

previously been conducted independently by the CINCs. The planning gap between the various foreseeable conflict levels of tactical warfare and those that called for the use of strategic nuclear forces had been bridged—in fact as well as in theory.

#### *interservice cooperation*

This change in strategy held a special meaning within the JSTPS. Although changes were primarily additive ones of emphasis and options, the fundamental policy for planning the use of nuclear forces remained. Obviously, the complexity of building the SIOP with additional preplanned options involving strategic forces has increased substantially. Assigning weapons in a manner that takes best advantage of the qualities each brings to the SIOP is extremely complex and painstaking. It has been especially challenging to plan the various attack options and weapon use or nonuse against the range of target categories while maintaining weapons carrier “purity”—each individual aircraft/missile load of weapons on only one type of target so the options are indeed discreet. The entire task represents interservice cooperation at its best, and the finished products provide the framework for the most flexible deterrent use of strategic forces possible under current capabilities—all within present circumstances of threat and equipment.

THE SIOP, then, is the embodiment of our actual (vs. theoretical) nuclear strategy. It has translated concepts and guidance into a complex of detailed plans that are both operable and credible—a specified necessary part of which is available in the individual ICBM launch control center, nuclear missile submarine, SAC bomber, and theater aircraft. The existence of these plans and the optional use of capabilities they represent must give pause to any potential adversary.

In this context, the Joint Strategic Target Planning Staff serves as a vital link between strategy and execution. By translating strategy into operational planning that allows various nuclear responses to be considered in greater variations of provocation, we have increased our ability to deter at all levels—and do it without sacrificing any major capability that we have had in the past. By successfully accommodating the significant

increases in complexity in the planning revisions, the JSTPS has again proved its value: its ability to meet dynamic and changing planning requirements in a fluid nuclear threat environment and the abilities of its combined membership to perform complex, multiservice planning smoothly and efficiently.

*Offutt AFB, Nebraska*

#### Notes

1. General Thomas S. Power, "The U.S. Nuclear Team," a speech delivered at the Armed Forces Day Luncheon, Detroit, Michigan, May 14, 1964.

2. *Ibid.*

3. U.S. Congress, House Subcommittee of the Committee on Appropriations for 1965, Hearings of the 88th Congress, 1st Session, Part 4 (Washington, D.C.: U.S. Government Printing Office, 1965), pp. 25–28.

4. See *Washington Post*, January 11, 1974, p. 1; *New York Times*, January

11, 1974, p. 6; and *U.S. News and World Report*, January 28, 1974, p. 22.

5. U.S. Congress, *Status of U.S. Strategic Power*, Report of the Preparedness Investigating Subcommittee of the Senate Armed Services Committee (Washington, D.C.: U.S. Government Printing Office, 1968).

6. James R. Schlesinger, *Annual Defense Department Report—FY 1975* (Washington, D.C.: 1974), p. 38.

7. Donald H. Rumsfeld, *Annual Defense Department Report—FY 1977* (Washington, D.C.: 1976), p. 18.

In his later years, Lindbergh took up the cause of conservation—the urgent need to balance technology and nature. He was inspired by a trip to Africa. As he once said: "Lying under an acacia tree with the sounds of the dawn around me, I realized more dearly the facts that man should never overlook: that the construction of an airplane, for instance, is simple when compared to the evolutionary achievement of a bird; that airplanes depend on an advanced civilization, and that where civilization is most advanced few birds exist. I realized that if I had to choose, I would rather have birds than airplanes."

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# THE INTEGRITY OF THE WARSAW PACT

## part II

WING COMMANDER PETER M. PAPWORTH, RAF

**T**HE first part of this report, published in the March-April edition of *Air University Review*, provided an overall assessment of the reliability of the East European members of the Warsaw Pact. The political, military, economic, and social unifying and divisive factors were considered with the conclusion that, on balance, the unifying factors were the more decisive.

The examination of the Pact as an entity was made on the basis of a scenario that assumed a rough balance in conventional forces in Europe between NATO and the U.S.S.R. In such a scenario it appears that collectively the East European states would support their Soviet ally. However, the countries in question vary considerably geographically, historically, and in many other ways. Therefore, before any conclusions can be drawn, these differences must be examined in detail.

### NSWP National Assessments

Historically, the area occupied by the Non-Soviet Warsaw Pact (NSWP) states has been an area of conflict, a region in which the Russians, and now the Soviets, have traditionally clashed with the nations of Western Europe. The whole of this area has now been dominated by the Soviets and Soviet-style Communist governments for more than 27 years. Few of the states concerned have experienced true Western style democracy and, therefore, have no basis for comparison.

How many of the national Communist parties are prepared to declare their independence of the U.S.S.R. in exchange for the risks of free contact with, and possibly a degree of domination by, a Western capitalist country? Which of the NSWP countries has a population sufficiently dissatisfied with its government and sufficiently well organised to overthrow its Communist leadership? With these types of questions in mind, a study of each member of the NSWP in turn might indicate whether, it would remain loyal to the Soviets and the Warsaw Pact or elect for neutrality or an alliance with the West or seek some other Communist champion.

#### *Poland*

Geographically, Poland is bordered to the east and west by two nations that have traditionally been her enemies; paradoxically, both the U.S.S.R. and the German Democratic Republic (GDR) are now her allies. At the end of World War II the Soviets compensated the Poles for the east Polish territories that she annexed by establishing the Polish western borders on the Oder-Neisse Line, thereby giving Poland territory that was German prior to World War II. In discussing Polish loyalty or adherence to her obligation to the Warsaw Pact, we must keep her geographical position in mind. Should Poland take independent action, she would certainly be confronted by enemies on both her east-

ern and western borders unless the GDR acted in concert with her. The likelihood of this will be discussed later, but certainly in either case a change in the GDR—Polish border would be a risk. If the GDR acted against the Soviets, the possible reunification of the two Germanys would have to be considered, and this might provide an even greater threat to Polish territorial integrity from the West, notwithstanding the Polish—Federal Republic of Germany treaty in 1969 that recognised the Polish Oder-Neisse border.<sup>1</sup>

Although a Communist government was imposed upon Poland following World War II, the Polish people periodically have been able, to some extent, to influence the actions of their government. In 1956, the workers at Poznań revolted and, with the support of other groupings, were instrumental in causing a change in the leadership that brought Wladyslaw Gomulka, an indigenous Communist, into power. This was achieved, and political and social stability was re-established without the use of Soviet forces—unlike Hungary the same year. In 1970 the workers at Gdansk and Lodz revolted, and, although some 600 people died,<sup>2</sup> a change in leadership was achieved again without the use of Soviet troops. Both revolts were prompted by poor wages and standards of living, and both brought a degree of liberalisation. In the 1956 case this liberalisation was short-lived, but, since Edward Gierek replaced Gomulka in 1971, a measure of general economic improvement has been enjoyed; when dissatisfaction is felt, a degree of freedom to express it is permitted. Even as recently as 10 November 1975, according to an Agence France Presse report,<sup>3</sup> a debate between dissatisfied housewives and the Polish party leaders was televised. Thus, since 1970 the liberalisation trends have continued, and some intellectual freedom and social contacts with the West have been allowed through travel, films, and books.<sup>4</sup> Furthermore, if progress in meeting consumer de-



mands and the standard of living can be improved steadily, many of the causes of dissatisfaction with the government will have been removed.

Caution must be exercised in putting too much faith in Communist economic planning, but if the results of the first three-quarters of 1974 can be used as a guide, then Poland's economic growth shows promise. Although trade with the West increased rapidly in 1974, despite some political problems, economic plans also involve greater trade with other Council for Mutual Economic Aid (COMECON) partners and further measures for coordination of Polish and Soviet industry in order to increase the rate of modernisation.<sup>5</sup>

Socially and culturally the Poles have become relatively independent of the Soviets, and, as has already been said, contact with the West is not that restricted in spite of official censorship. The resurgence of Polish nationalism is being satisfied, as perhaps indicated by the official restoration of the historic White Eagle of Poland. The White Eagle represents the visible symbol of Polish patriotism. The banners under which the Poles defended their country in 1939 bore the same symbol. During the Gomulka regime there was considerable conflict between the state and the Roman Catholic church, but these conflicts have largely been resolved under Gierek. The youth in Poland tend to react against the authority of the Communist party at times, as they do against authority in the West. However, party influence is being extended deeper into the youth organisations. Whether the party will be successful in obtaining the loyalty of the national youth is uncertain, but there are indications that, while not fully understanding all the ramifications of the Communist ideology, the youth no longer reject the present social order.<sup>6</sup>

The present Communist leadership is firmly in control in Poland, and this central-

ised control was probably further strengthened by the elimination of 314 district, middle level administrations in May 1975.<sup>7</sup> The leadership has indicated the extent of the actions it is prepared to take to retain control by the events of 1970 with the killing of Polish people by the Polish army. The armed forces also demonstrated their loyalty to the government at the same time. The liberalisation and, at least, limited satisfaction of consumer demands under Gierek can only increase the people's willingness to accept their present form of government, particularly if continued progress is made in these respects. Although trade with the West is increasing more rapidly than that with its COMECON partners, it is still much lower in absolute terms. Economically, Poland has displayed no disloyalty to COMECON in its general trading policy.

Politically and economically Poland appears firmly lodged in the Soviet Communist bloc. The Communist leadership appears likely to be able to retain control of the country and is progressively removing the causes of popular dissatisfaction. In any conflict between the Soviets and NATO, therefore, the Poles would have to balance the present situation against the risk of yet another revision of their Western border and the total collapse of her political and economic system. In such circumstances it seems likely that Poland would actively support the Soviets through the Warsaw Pact and, perhaps, seek a further degree of independence as the price for doing so.

#### *German Democratic Republic*

The GDR differs from its Warsaw Pact partners in that it was created as a separate state only by the post-World War II confrontation in Europe between the Soviet bloc and the capitalist West. Thus, while trying to assess the loyalty of the GDR towards the Warsaw Pact, one must continually judge by how

much the artificiality has become reality. How much do separate values and attitudes differ between the GDR and Federal Republic of Germany (FRG)?

Since the end of World War II, the GDR has been modelled on the U.S.S.R. and has had Soviet troops based on its soil continuously. The Socialist Unity Party (SED) was imposed on the GDR people by the Soviets and has had the task of building its own economic structure—a difficult one since its industry was either destroyed during the war or was sent to the U.S.S.R. in the form of postwar reparations—and creating a national identity.

Economically, the GDR has made good progress by East European standards and has probably the highest standard of living of all the Warsaw Pact members. The GDR economy has been structured to meet Soviet and COMECON demands which, under Walter Ulbricht, who was in his latter years extremely nationalistic, would seem to have worked to the GDR's advantage, at least compared with other COMECON members. In 1970, 43 percent of all imports and 40 percent of all exports were to and from the U.S.S.R., which is indicative of GDR dependence on the Soviets and the degree of their economic integration.<sup>8</sup> The GDR, while seeking advantageous trading arrangements with the West for herself, gives the impression of trying to deter other COMECON members from doing the same; this is understandable since her steady economic development and relative success is based on the availability of the COMECON market for her more advanced industrial goods. The GDR is also in a relatively good position to influence COMECON policies as she provides the chairman for three COMECON Standing Commissions.<sup>9</sup> All this may not endear the GDR to some of her partners, but it does lock her fairly firmly into the socialist economic system of Eastern Europe.

The creation of a solid, socialist political

system has provided the SED leadership with many problems, the most significant of which was, and probably still is, the underlying anti-Soviet feeling in the GDR. This anti-Soviet feeling, engendered by their occupation of the GDR after World War II, was further reinforced when Soviet troops were used to put down the workers' revolts in 1953. There was another revolt by both party and nonparty intellectuals in 1956, but this was anti-Stalinism/anti-Ulbricht rather than anti-Communist. These revolts, and the reaction to them, accelerated defections to the West. Officially, 2,759,922 East Germans fled to the FRG between 1949 and 1962.<sup>10</sup> In the long term this may have been to the advantage of the GDR leaders, in that many of those likely to have provided an active opposition to the government left the country. However, economically the GDR could not afford to allow further depletion of its labour force. The Berlin Wall in 1961 and a fortified border prevented more mass defections. Both the wall and the border fortifications remain, and one cannot help assuming that the SED leadership believes them still to be necessary. This view is supported by a poll taken of juveniles in January 1975 that showed an "overwhelming number" who would defect to the West, given the opportunity.<sup>11</sup> This may be another case of youth reacting against authority since it tends to conflict with other reports: between 1962 and 1966 there was a steady increase in popular support for the SED leadership.<sup>12</sup>

Although Erich Honecker, to whom power was transferred in 1971, is less nationalistic in outlook than Ulbricht, he has led the GDR back to the Soviet model with regard to foreign policy while maintaining the national identity that Ulbricht worked so hard to achieve. With economic progress, national confidence also appears to have increased as has international recognition. It is also probably in the Soviets' best interest to allow a degree of GDR nationalism since it can only



increase the division between the two Germanys and act against a strong reunified Germany in the future. Certainly the Soviets have displayed a remarkable degree of confidence in the GDR National Peoples Army (NPA), many units of which are directly subordinated to the Group of Soviet Forces Germany (GSFG). The NPA also receives more advanced Soviet weapon systems earlier than other NSWP armed forces;<sup>13</sup> for example, the Scud-B surface-to-surface missile appears to have been supplied only to the GDR so far.

The SED leadership certainly is firmly in control in the GDR and appears to have the confidence of the Soviets. Under Ulbricht, who lost the support of the Soviet leaders not because of his nationalistic attitudes but because he was "rocking the détente boat," the GDR was a staunch supporter of the Soviets in keeping the other NSWP members in line; they played a leading role in the 1968 invasion of Czechoslovakia. Under Honecker, who is following the Soviet line more closely, the GDR is likely to be even more supportive of the U.S.S.R. Undoubtedly, there remain those who wish for German reunification, particularly those with close relatives in the FRG, but the number so affected is decreasing with time, thus reducing one of the major incentives for reunification. The GDR people have now developed a national identity and are, therefore, more likely to support their leaders, who in turn would undoubtedly meet their full obligations to the Warsaw Pact in any conflict with NATO and the FRG since their whole separate identity would be at risk to do otherwise.

### *Czechoslovakia*

Although Czechoslovakia fell under Communist rule through the intrigue of her indigenous Communist party in 1948, it must be remembered that even before World War II the party had considerable support

throughout the country.<sup>14</sup> In the Czechoslovakian democracy of that time, the Communists possessed one of the four largest parties in parliament. Maybe this is not too surprising in view of the threat to which she was exposed by fascist Germany and the lack of support she received from the rest of Western Europe. Thus, for many Czechoslovaks the invasion by the "Mother of Socialism" in 1968 must have been even more traumatic than it would have been for some of the other NSWP states. It must also be remembered that although the liberalisation by the Dubcek regime may well have produced a multi-party state, Alexander Dubcek himself was a "socialist," and he enjoyed increasing popular support. One should not, perhaps, put too much faith in East European public opinion polls, but in one such poll conducted in August 1968, Dubcek received a "political trust" rating of 96.1 percent and at the same time only five percent preferred a return to capitalism.<sup>15</sup> Indeed, it has been suggested—although it is not clear who was on which side—that there was some disagreement between Secretary Leonid I. Brezhnev and Marshal Andrey Antonovich Grechko (Soviet Defence Minister) over the invasion,<sup>16</sup> and it may have been the views of the other NSWP countries involved in the invasion, and the GDR in particular, which tipped the balance. For the majority of Czechoslovaks the invasion of 1968 engendered nothing but hatred for the Soviets and the NSWP countries that helped them.

Prior to 1968, Czechoslovakia was considered one of the most reliable members of the Warsaw Pact and Gustav Husak, who succeeded Dubcek, has had the task of trying to recreate that "normal" situation. Some quarter of a million of the previous party upper echelons and about half a million Communist party members were purged following the removal of Dubcek; when one adds to this about 100,000 people, presumably those with some initiative, who fled to the West<sup>17</sup>

it is not difficult to understand the economic and intellectual stagnation that occurred in the years immediately following the invasion. Replacements for the purged elite had to be found from those who, prior to the invasion, had shown little interest in politics, and some degree of "political normalcy" now has been restored. However, this normalcy is regarded by a number of Western observers as a stability created by political apathy rather than one brought about by genuine political interest.<sup>18</sup> Doubts still exist, however, in the minds of the present leadership, and presumably the Soviets, since it was only in August 1975 that Dubcek was expelled by a Czechoslovak trade union. One can only assume that it was believed that he might still become a focal point for at least token opposition to the Husak regime and that this was a final attempt to rob him of any standing in the country. Furthermore, continued official criticism of the interpretation of science and ideology in education<sup>19</sup> would indicate that normalisation is by no means complete, although this could be merely a facet of the increased ideological propaganda effort throughout the Warsaw Pact.

The political apathy of the people has had a twofold benefit to the current leadership. Since the people failed in their attempt to seek political freedom, they have now turned their efforts towards seeking freedom in the area of consumption; as a result they tend to work harder to earn the money to buy consumer goods, and the economy has improved overall. Yet, since political loyalty produces better job opportunities, many are prepared to pay lip service to the Husak leadership in order to secure better jobs. While the economy is improving and Husak dares take no real economic initiatives that would signal a departure from the Soviet line, and while Czechoslovakia remains a full participant in COMECON, she is also increasing her trade with the West. Czechoslovakia does almost half as much trade with the West

now as she does with her Communist partners.<sup>20</sup> However, it would be an extreme Western optimist who would forecast that these trade contracts would be likely to influence the Czechoslovak leadership or produce any political adventuring in that country, particularly bearing in mind the almost total lack of Western reaction to the events of 1968.

One interesting facet of the Czechoslovak political scene has been the increasing conflict between the Czechs and the Slovaks; this conflict is supported by the opinion polls to which reference was made earlier. Husak is a Slovak and a consistent federalist; it is possible that these were among the reasons for his selection by the Soviets. Although the Slovakian Communist Party is led by the "ultras" (hard liners), Husak has had considerable Slovak support. However, the Slovaks, who comprise only 30 percent of the total population, are now equally represented with the Czechs in the national government. The Slovaks also enjoy their own ethnically separate Communist party while the Czechs have to be satisfied with the national Czechoslovakian Communist Party.<sup>21</sup> This has given rise to at least hints of an increase in Czech nationalism and is certainly not conducive to political stability within the country as a whole.

In any conflict between the Warsaw Pact and NATO, one of the most significant factors dictating Czechoslovak actions would undoubtedly be the presence of Soviet troops within the country. The Soviet troops are there under a Czechoslovakian/Soviet Friendship Treaty—a manifestation of the Brezhnev Doctrine—and the Czechoslovak people would think twice before openly changing sides after the 1968 debacle, even if the Soviet troops were actively engaged in hostilities in the border area. Husak is a Soviet puppet, and on the face of it he appears to be unwilling and incapable of taking an independent line. No other dominant figure has,



as yet, appeared from the apparently politically disinterested party administration. The Czechoslovak armed forces took little or no action to resist the 1968 invasion, and there is no reason to doubt that they will follow the national government and Soviet directives in the future. At present the people of the country seem interested only in improving their material well-being, but their reactions in the future might depend on the potential conflict that exists between the Czechs and the Slovaks. The Slovaks would seem unlikely to wish to jeopardise their new-found parity with the Czechs, but the latter, from whom Dubcek received most of his support, might conceivably allow their hatred of the Soviets to overcome their earlier disillusionment with the West and react against the Soviets in some numbers. Certainly it would be easier for the Czechs, who live predominantly in West Czechoslovakia, which has a common border with the FRG. Much will depend on the continued satisfaction of consumer demands and the possible return of the political elite of pre-1968.

### *Hungary*

The relationship of Hungary with the Warsaw Pact need only be traced back to 1956 when she tried to resign from the Pact and establish a multiparty system of government. (Incidentally, the Warsaw Treaty made no provisions for withdrawal until one year prior to the twentieth anniversary, and no member was "bold" enough to do so—even assuming they wished to.) Soviet troops were used in "persuading" the Hungarians to remain within the Pact. The Hungarian revolts of 1956 were really the result of factional conflict between the pro- and anti-Stalinist, accompanied by individual protests by workers and students. The Hungarian armed forces did not act effectively on either side.<sup>22</sup> Strangely enough, the Russian troops garrisoned in Budapest were sympathetic to the

local population, and they had to be replaced hurriedly by Mongolian troops from Siberia.<sup>23</sup> The Mongolian troops were brutal in their suppression of the Hungarians, and the memory of their action has undoubtedly been passed on to the generations that have followed. Thus, if the European/Asian balance in the U.S.S.R. continues to swing in favour of the Asians, it is unlikely to contribute to any pro-Soviet revival!

Janos Kadar, who came to power after the revolts, has been successful in gaining a real measure of popular support by his liberalising actions, despite the terrorist oppression that occurred during the first few years of his regime. At the same time Kadar has exercised care not to offend the Soviets who installed him as the leader of the Hungarian Socialist Workers' Party (HSWP). Kadar has confined his national initiatives primarily to the domestic scene and has followed the Soviet line on foreign policy; although having said this, and perhaps because the domestic successes have increased the confidence of the Hungarian leaders, they are as bitterly opposed to the Brezhnev Doctrine as Romania, although less blatantly so. Kadar is a dedicated international Communist and a genuine friend of the U.S.S.R.<sup>24</sup> He is also regarded as a believer in the "more humane type of socialism." Prior to 1968 the Hungarian leadership enjoyed particularly good relations with the Dubcek administration in Czechoslovakia, and it is by no means obvious why the Soviets have allowed Hungary some of the latitudes they were not prepared to accept in Czechoslovakia. Whatever the reasons, Kadar has retained the leadership against domestic opposition from both right and left.

The heart of Kadar's domestic success has been the 1968 introduction of the New Economic Mechanism (NEM), which reduced the centralised economic control to the minimum consistent with an authoritarian, one-party state.<sup>25</sup> Certainly the country has ben-

efted economically from the NEM, but a profit-motivated economy has brought problems for the party; bourgeois attitudes have developed as has a management-worker differential to the extent that trade unions have become more militant and the government has had to act to meet their demands.<sup>26</sup> It is interesting to note that organised labour, as opposed to party organisations, has the power to influence government decisions! However, Hungary has few natural resources, and her economy is based on raw materials and fuels imported almost exclusively from the U.S.S.R.<sup>27</sup> Although Hungary has made strenuous efforts to increase her trade with the West, including the U.S.,<sup>28</sup> she is firmly tied to COMECON with which she does about 75 percent of her trade. While trade with the West may bring the technology required to continue to meet her consumer demands, her balance of payments in convertible currency is unfavourable, and her basic economic structure would suffer if she had to compete on the open market for raw materials that are still available from the U.S.S.R. at lower-than-world prices.

There are now signs, however, despite the continuation of economic and social reforms, that there has been a degree of ideological tightening-up;<sup>29</sup> Soviet pressure could have dictated this, but it is also common to the other members of the Warsaw Pact since the beginning of the *détente* era. In 1973, a sociologist and two prominent philosophers were expelled from the party because their work was politically unacceptable; and, in 1974, three early reformers, Rezso Nyers, György Aczél, and Lajos Feher, were removed from the HSWP Secretariat. Furthermore, the guidelines for the party congress in March 1975 dictated that while party members were entitled to hold their own views they were not to be voiced if they clashed with those of the party. However, even as recently as September 1974, "Janos Kadar said that relations between the Euro-

pean Economic Community (EEC) and COMECON should facilitate contacts rather than direct economic exchanges,"<sup>30</sup> which is certainly open to favourable Western interpretation.

It would appear that while reforms are likely to continue in Hungary, as perhaps indicated by concessions continuing to be made towards the Catholic church, there has been a slowing down of such reforms to a rate acceptable to the Soviets and to enable the HSWP to retain control of the situation. Economically, the state is dependent on Soviet raw materials but also on Western technology to progressively improve the standard of living of the people. Kadar also appears to be in a position where he is certainly influenced by public opinion as is manifest by his acquiescence to trade union demands—rather like a number of Western leaders!

The Hungarian people are no doubt aware of the success of their "taste of capitalism," as the leadership must be, even if they are now a little embarrassed by it. Given the opportunity, it is unlikely that either the leadership or the people would wish to risk another 1956 by openly siding with the West. However, despite possible initial economic difficulties, it is conceivable that the nation as a whole could opt for a neutral attitude like that of Yugoslavia, with which there is considerable social contact, a lengthy common border, and strong economic ties. Hungary might well see neutrality as a means of retaining economic ties with both East and West and a means of continuing, with relative independence, its experiment in "goulash Socialism." Without doubt, few reports written on contemporary Hungary indicate a great love of the Soviets and most suggest a marked lack of Marxist-Leninist revolutionary fervour while they all confirm a leadership that is prepared to continue reforms, albeit at a limited rate, to satisfy national public opinion. This assumes a continuation



of present policies in Yugoslavia after Tito's death; a pro-Soviet Yugoslavia would undoubtedly influence any decisions made by the Hungarian leaders.

### *Romania*

In 1945, Dr. Petru Groza, the Prime Minister of Romania said, "We wish to guarantee [our people] a development based on the deserved participation of the masses . . . and the weeding out of irritating privileges . . . political stability amid the instability of international politics, in which small states risk being absorbed and crushed."<sup>31</sup> The Romanian Party statement on 26 April 1964, plainly rejected the supranational control and planning of COMECON as having the most "serious political and economic implications" and went on to delineate the absolute sovereignty of socialist states to decide their own route to a socialist society.<sup>32</sup> The Romanian Communist Party's (RCP) resolution at the 11th congress in November 1974 contained the following: "The Congress commissions the party to attend a conference of European communist and workers' parties, bearing in mind the need that it be conducted in a democratic spirit and that the full equality of all parties in preparing and discussing the relevant matters be ensured."<sup>33</sup>

These quotations serve to illustrate the economic and politically independent line that Romania has attempted to follow from the end of World War II to the present time under the leadership of Nicolae Ceausescu, who came to power in 1965. Despite Ceausescu's Stalinist approach to government and the very limited freedom of any sort allowed the Romanian people, his policy of independence has appealed to Romanian nationalism, and the support that it has brought him has enabled a continuance of that policy. Romania has been anything but an active member of the Warsaw Pact since 1964, when she

refused to allow the Pact to hold multinational military exercises on her territory. In recent years Romania has had but a token representation in the form of observers at most Pact military exercises. In 1968 she was the only NSWP member who did not participate in the invasion of Czechoslovakia and even formed an armed militia, which was undoubtedly a response to that invasion.

Economically, the Romanian leadership has refused to remain a peasant nation, solely to provide food and raw materials to the U.S.S.R., and has attempted to industrialise. Since dependence on the Soviets was deemed unacceptable, Romania, under Ceausescu, has increasingly turned to Western trade as a means of obtaining the industrial goods and the technology required by its industry. Certainly Ceausescu can justifiably claim some successes in improving the material well-being of his people, but the price has been to become increasingly indebted to the West. For example, the trade deficit in 1974 was reported to be somewhere between DM. 3,000 million and DM. 892 million with the FRG alone.<sup>34</sup> This could be the reason why the Romanians plan to halve their exchanges with the West in the next five years. Furthermore, although in March 1971 a law was passed allowing for the setting-up of joint West/Romanian industry in the country, only a very limited number of Western companies have taken advantage of this opportunity so far. Overall, Ceausescu's Western trading policy, while having some initial successes, is now foundering, and, whether through economic necessity or political pressure, there are indications that Ceausescu is increasing Romanian participation in COMECON.<sup>35</sup>

Despite the fact that the Political Executive Committee (PEC) of the Romanian Communist Party met on 14 October 1975 especially to discuss food and consumer goods, indicating a desire to meet some of the demands of the people, there is no doubt

that Ceausescu is firmly in control of the country; the mass media are heavily controlled, and travel, even to other Communist countries, is restricted to the privileged few. Ceausescu's task is made somewhat easier since in modern times the Romanian people have never known a stable, free society. Thus, in assessing Romanian reactions to a NATO/Warsaw Pact conflict, one need only assess the reactions of the RCP and its leadership, namely Ceausescu, who seems likely to occupy that position for some time.

There are already signs that Ceausescu's Western trading policy has not paid off, and he is moving into the COMECON and Soviet economic fold. While in the past Romania has become increasingly an inactive member of the Warsaw Pact, a complete break and an alternative alliance with the capitalist West would mean a considerable risk of unsettling influences, which the increased contacts of such an alliance would bring; this is a risk that Ceausescu would be unlikely to accept. An alternative policy would be one of neutrality, again rather like that of Yugoslavia. Although such a policy is more conceivable since the emergence of the PRC as an alternative centre of world Communism, unlike Yugoslavia, and Albania too, Romania "enjoys" a lengthy border with the U.S.S.R. The latter would most likely deter the Romanians from really taking advantage of the support that she would receive from the PRC, with whom she maintains fairly good relations. Furthermore, Romania has no common border with the NATO nations.

Romania's most likely course of action would be to side with the Soviets and try to retain, and perhaps increase, its domestic independence as a reward for its loyalty. One could also draw the conclusion that the Soviets have made the same assessment of Romanian reactions and that is why her independent economic and foreign policies have been tolerated. The likelihood of Romania adopting this course of action is further in-

creased if one considers how Bulgaria might react.

### *Bulgaria*

Since World War II, Bulgaria has been the Soviets' most consistent ally, both economically and politically. Because of this, and because of her strategic value in relation to the Middle East and the eastern Mediterranean, the Soviets have cultivated this loyalty and tend to treat Bulgaria as the "favourite" of the Warsaw Pact.

At the end of World War II, Bulgaria was placed firmly in the Soviet orbit. The Bulgarian Communist Party (BCP) had no difficulty in consolidating its political position, with Soviet support, and has been in power ever since. The natural stoicism of the Bulgarian people has made it easier in many respects for the BCP to retain its effective authoritarian control over the domestic scene.<sup>36</sup> There were internal party problems in 1965, and a conspiracy against Todor Zhivkov, the BCP leader, failed and resulted in the trial of seven party members, five of whom were involved with the military; one of the ringleaders, Ivan Todorov-Gorunya, shot himself in April of that year.<sup>37</sup> However, there are no apparent indications that any pro-Western elements were involved in the conspiracy; it was either between pro- and anti-Stalinist factions or between local factions since there is a strong sense of localism within Bulgaria.

In the 1950s the Muscovites (those who were Moscow trained with obvious primary loyalty to the Kremlin) within the BCP were replaced with younger, indigenous Communists, but despite this the BCP is an aging party. Many of the older generation of ideologists have been retained in the leadership because there is a general feeling that the younger generation desire more freedom and lack the revolutionary fervour of their fathers. Ideological pressure is now be-



ing directed at the Bulgarian youth, and the BCP has "expressed concern at the apparent reactivation of church and religious activities, especially in regard to young people."<sup>38</sup> The BCP has also experienced some problems of nationalism. To some extent an outlet has been found for nationalism by means of the Macedonian problem with Yugoslavia. However, this has not satisfied all demands, and in February 1975, "Secretary Lilov, in his report to the plenum . . . noted that 'nationalism based on the anti-Soviet grounds' has 'unfortunately recorded some success.'"<sup>39</sup> Although these minor perturbations in the otherwise stable domestic scene could, conceivably, develop into significant problems, the BCP remains firmly in control and its foreign policy precisely follows that of the U.S.S.R., including its policy towards the PRC.

Economically, Bulgaria has benefited considerably by her loyalty to the U.S.S.R., particularly when compared with Romania. Bulgaria is the Soviets' fourth largest trading partner, and economic and industrial development is virtually integrated with that of the U.S.S.R. The Bulgarians are investing in the development of Soviet raw material and energy resources not only in financial terms but also with Bulgarian labour. Reportedly, between 30,000 and 45,000 Bulgarians are employed in the U.S.S.R.<sup>40</sup> although this "investment" has been criticised by some Bulgarian experts. Bulgaria can now be regarded as an industrialised nation, and in the 1960s her growth rate in industrial output was the highest in the world after Japan.<sup>41</sup> Although trade with the West, and the FRG in particular, has been indispensable to Bulgarian industrial growth, she has a considerable trade deficit and will, inevitably, have to cut back this Western trade to some extent.

Culturally, Bulgaria cooperates more closely with the Soviets than any other East European country, even to the extent that all

Bulgarian children are taught Russian.<sup>42</sup> Thus, one can detect no evidence of significant political, economic or cultural deviation from the Soviet line either domestically or in foreign policy. Bulgaria has made considerable progress with its past policy, and, therefore, one must conclude that she would meet her full obligations to the Soviets and the Warsaw Pact in any future conflict with NATO.

WITH the assumption of an even balance of Soviet-to-NATO military force in Europe, one must also assume that any future conventional conflict would take place, at least initially, adjacent to the present NATO/Warsaw Pact borders. If one excludes the southern and northern flanks, all NSWP countries that have a common border with NATO, plus Hungary which borders on neutral Austria, have Soviet troops based on their soil. Therefore, even if Soviet first echelon combat forces were diverted from any East European "policing duties," the second and third echelon forces moving through, and the support elements within, those countries would have a considerable deterrent effect against any unilateral action by those NSWP countries.

Politically, there is reasonable accord between the Communist party leaders in all of the NSWP countries and the U.S.S.R., with the possible exception of Romania. Even Romania, which has been permitted a degree of independence in its foreign policy, was careful to sign new treaties of friendship with the U.S.S.R. and Poland within two years of the events in Czechoslovakia in 1968. Internally, the national Communist parties are firmly in control. In Bulgaria and Romania the degree of freedom of the people is quite limited, and there would appear to be little likelihood of any coordinated opposition of significant size to overthrow their current leaders. In the remaining NSWP countries public opinion

appears to have some influence over governmental decisions, and attempts to satisfy public demands are made; if this policy continues, then national leaderships are likely to be able to retain control, not only through repression but through increasing popular support. In Czechoslovakia political apathy has been the consequence of the 1968 invasion, and, regardless of political policies, no cohesive opposition is likely while the material demands of the people continue to be met. Since the invasion of Czechoslovakia, only Poland, in 1970, suffered any significant internal disturbance, and this was put-down by national armed forces. Politically, the NSWP countries' leaders would most likely support their fellow Warsaw Pact members and appear to have sufficient control of their populations and armed forces to prevent significant opposition.

Ideologically, the Warsaw Pact countries recognise a threat in the increased contacts likely in a period of détente and are collectively taking action to boost their ideological integrity. Even Romania is taking great care to limit contact between the Romanian people and the West, and only the favoured few are permitted to make such contacts. Economically, all the NSWP members are heavily dependent on each other and the U.S.S.R. In a resource-scarce era, they are investing jointly with the Soviets in exploiting Soviet raw materials. Certainly they all trade with the West to obtain the technology to further their own industrial development, but without exception they are operating a trade deficit with the capitalist countries and are likely to turn more towards trade with their Soviet and other COMECON partners. Furthermore, there is some opposition to trade by COMECON with the West by some of the specialised industrial states since they cannot compete for the COMECON markets with Western suppliers. One country that could suffer considerably from a reversion to a COMECON integrated economy would be

Hungary; she has experimented with capitalist techniques and had a measure of success. A degree of social liberalisation has followed the Hungarian economic initiatives, and, while a slower rate of reform might be accepted by the Hungarian people, a halt and a reversion to earlier policies might well produce sufficient dissatisfaction to trigger some pro-Western actions. However, the memory of 1956 remains, and the Hungarian people would be unlikely to defy the Soviets openly; a passive reaction would be a more likely course.

There has been a resurgence of nationalism in Eastern Europe, but in general this has been successfully channelled into support for national leadership. The only country where nationalism could be a problem for the leadership is in Czechoslovakia, between the Czechs and the Slovaks; if this should develop into real conflict, then it is conceivable that the Czechs, sharing a common border with the FRG, might seek to break away despite the lack of support they have received from the Western allies in the past.

Overall, the assessment of the reliability of the NSWP countries can only be a positive one. Prior to any future armed conflict between NATO and the Warsaw Pact, the battle will be waged on the economic and ideological front. Trade has its advantages and disadvantages, but the trading contacts that are made must also be used to further ideological interests. This type of attack is feared by the Communist Party and, hence, the stepping-up of ideological propaganda. The West must not just ignore Eastern Europe and must, whenever possible, actively encourage nationalism in the area. To do otherwise could result in progressive "Estonisation" of Eastern Europe.

Until such time as the ideological battle begins to show real results, in planning for the contingencies of a conventional war in Europe, as postulated in the scenario for this examination, one must draw the conclusion



that the Warsaw Pact would act in concert against NATO, with the possible exception of Hungary and part of Czechoslovakia, and

that all the other NSWP states would meet their full obligations to the Pact.

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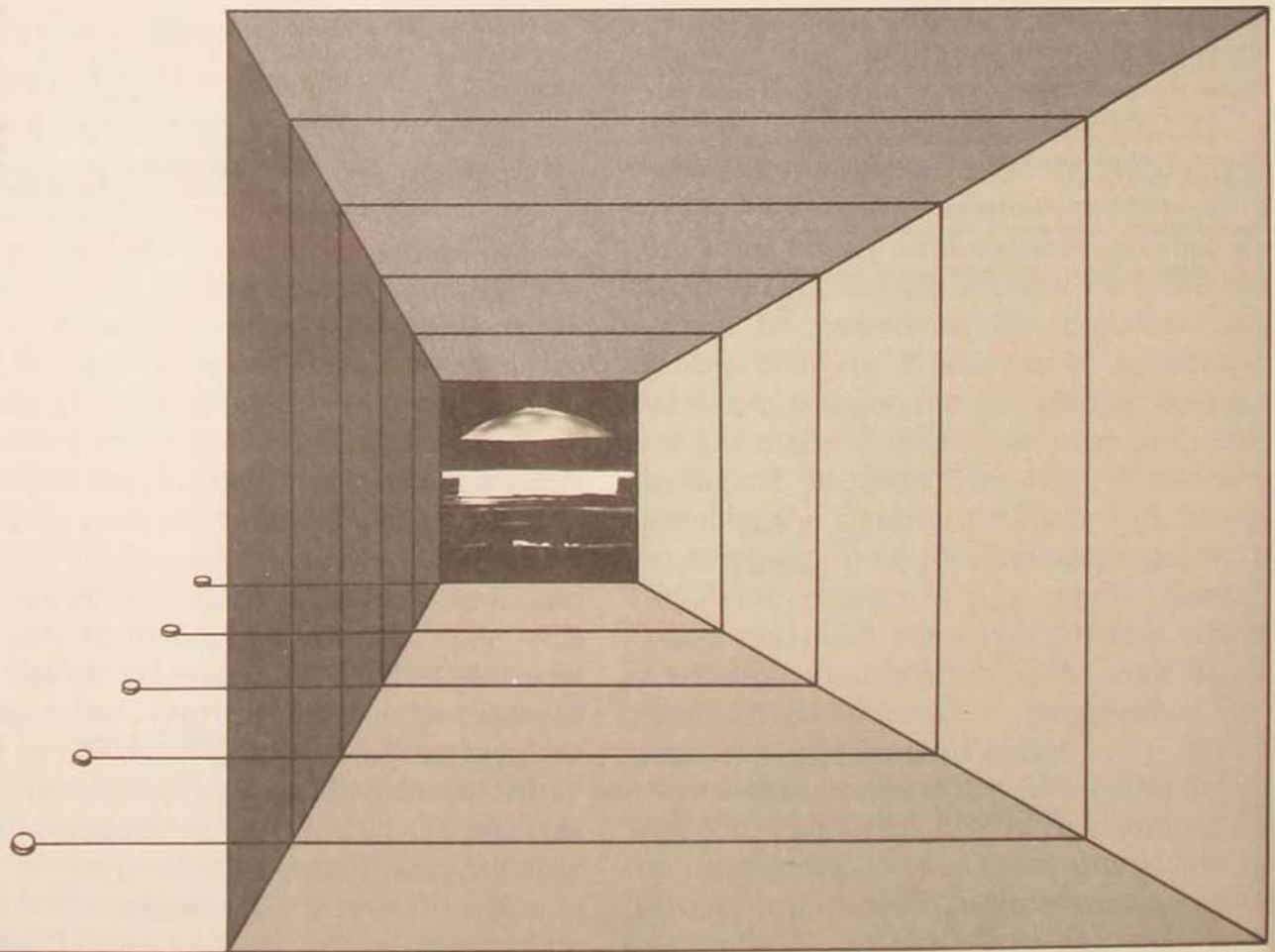
Unless we are prepared to defend portions of the world outside of North America, we shall soon find ourselves with nothing else but North America to defend.

JAMES SCHLESINGER

# RETHINKING THE UNTHINKABLE

*Limited Strategic Nuclear Options—  
credible or dangerous?*

COLONEL WILLIAM M. CHARLES, JR.





**T**HE dynamics of American security in a nuclear world have fostered vigorous debate over the military capabilities required to protect and preserve national freedom. Defense intellectuals and strategists generally agree that our principal security objective is to avoid a nuclear war, but there are disagreements on the military forces required to meet this objective and the capabilities these forces should have. For many years this country has felt relatively safe under the security blanket of our assured destruction forces, but there has been a growing suspicion that today this is not enough. The Soviet Union's continued strategic force buildup far in excess of what would be reasonably needed for the assured destruction task has initiated a fundamental re-examination of the doctrinal basis of American defense policy. To this end, the key issue that has resurfaced is the question whether the President of the United States has need of a capability for engaging in limited strategic nuclear options (LNO) as an optimal response in acute crises with a nuclear-equipped adversary.

#### *deterrence and assured destruction*

The cornerstone of American military strategy has been the deterrence of nuclear war. Deterrence is basically a psychological phenomenon, based on forces in being and the enemy belief in both the effectiveness of those forces and in our willingness to employ them decisively if necessary. Because deterrence finds its strength in what the opponent thinks his adversary can do and, more importantly, will do in response to any outside provocation, perceptions become a key com-

ponent. And in large measure, perceptions are solidly rooted in strategic force capabilities across the entire spectrum of conflict scenarios.

For the past decade or so deterrence of nuclear war has been based on the doctrine of assured destruction—the United States possessed sufficient strategic forces so as to be able to withstand a Soviet first strike and respond with a second strike of sufficient magnitude to destroy the Soviet Union as a viable society. Eventually the Soviet forces were expanded sufficiently to obtain a comparable assured destruction capability against the United States. It became customary to refer to this condition as “mutual assured destruction”—each side had enough nuclear strength to destroy the other with a retaliatory strike. In the United States it soon became the practice to determine the desired strength of the strategic forces by their contribution to the assured destruction role; thus the scenario of spasm war, the least likely type of conflict because of its suicidal nature, tended to become the typical case. Because of this practice it is now thought that American strategic forces will perform very well in the least likely kind of war. But it has become increasingly difficult to visualize the President, or even his opposite in the Soviet Union, unleashing assured destruction forces for all possible scenarios.

It was the growing conviction that mutual assured destruction was not a panacea for survival that led President Richard M. Nixon to ask his thought-provoking questions in 1970:

Should a President, in the event of a nuclear attack, be left with the single option of ordering the mass destruction of enemy civilians, in

the face of the certainty that it would be followed by the mass slaughter of Americans? Should the concept of assured destruction be narrowly defined and should it be the only measure of our ability to deter the variety of threats we may face?<sup>1</sup>

The needs were amplified by Secretary of Defense James R. Schlesinger in his fiscal year 1975 report to the Congress:

Rather than massive options, we now want to provide the President with a wider set of much more selective targeting options. Through possession of such a visible capability, we hope to reinforce deterrence by removing the temptation for an adversary to consider any kind of nuclear attack.<sup>2</sup>

The theory behind flexible options or limited strategic nuclear options encompasses the capability to use a single or several nuclear weapon systems to strike carefully selected military targets in the Soviet Union, not for revenge but as an additional option short of full nuclear response. It is not a question of seeking new systems but of improving the current forces through modest improvements in accuracy and greater targeting flexibility. This second requirement provides the "option" characteristic; with it the President could select and order an attack on one or several military targets depending on defense objectives.

When one reads the numerous articles that gushed forth on the heels of Dr. Schlesinger's report to Congress, he cannot fail to be impressed by the scholarly examination to which all facets of the problem have been subjected, on the whole with more clarity than emotion.<sup>3</sup> In general, there are two sides to the debate. On the "stability" side are those who believe that the concept of limited strategic nuclear options (or flexible operations) embraces nuclear gamesmanship which could bring the world to the brink of disaster. They believe that American strategic forces are already adequate and sufficiently flexible, and, therefore, new programs designed to modernize strategic

weapons will needlessly jeopardize the balance of nuclear forces and fuel the bilateral arms race. Arrayed on the "flexibility" side are those who question a continued reliance on an assured destruction policy for deterring nuclear conflict at all levels. This school of thought believes that the "stability" argument fails to come to grips with the central issue: because total reliance on an all-out response is essentially suicidal, if deterrence fails, how *is* the United States to respond to a Soviet limited nuclear attack? To aid in arriving at some conclusion about flexible options, the major arguments advanced by the two schools of thought will be examined.

*"Stability" arguments.* There are three basic arguments against more flexible nuclear options: (1) arms competition between the superpowers "will almost inevitably result"; (2) a capability for "limited counterforce options will make limited nuclear war more credible and therefore more likely"; and (3) more flexibility and "improved accuracy may lead to instability in time of crisis."<sup>4</sup> There are refinements to these three points and also several minor arguments such as the claim that costs of force modernization are excessive and that continued modernization in an era of détente is counterproductive. We shall present the three basic arguments in some depth and then briefly review the two minor issues.

LNO is criticized by the "stability" school for the arms-building interactions between the superpowers that will surely result; that is, if the United States deploys forces designed for flexible options, the Soviet Union will not stand still. Then, as the Soviet Union reacts, the United States must respond further; thus, the arms competition spirals upward. Our greatest assurance for deterring political probes as well as preventing nuclear or conventional weapon strikes, the argument continues, is the reliance on our assured destruction forces—a mutual hostage strategy. Furthermore, for this role we have



more than enough strategic forces; actually the United States possesses a wasteful and dangerous capacity for "overkill."<sup>5</sup>

The second "stability" argument is that if nuclear weapons become more usable and less mysterious, it will become more "thinkable" to resort to their use during a crisis and, therefore, more acceptable. And as nuclear war becomes more acceptable, it becomes more likely. Many opponents of LNO seem to have one fear underlying their opposition—nuclear warfare, with all its potential for an Armageddon, simply cannot be tolerated. In other words, the consequences of nuclear warfare are so horrible, so destructive to humanity, that nothing must be done with our strategic forces that would seem to disturb the "mutual balance of terror"; it is "unthinkable" to experiment with strategic forces lest a destabilizing process result. Built-in "flexibility" will only tend to increase the suitability of nuclear weapons for use during a crisis, particularly when our backs are to the wall—again a dangerously destabilizing condition. Thus culminates a vicious circle that returns us to the war we *must* avoid. The underlying assumption behind these beliefs is that, as in most physical conflicts, the use of force would escalate automatically, that is, any exchange of nuclear violence would bring the human race to the brink of extinction. The "stability" school insists, in other words, that "controlled" nuclear warfare is a myth; once the nuclear threshold has been crossed, escalation to general nuclear war is inevitable.

This leads to the third principal argument opposing flexible nuclear options: the counterforce danger. LNO, if "counterforce" weapons are involved, is considered to be destabilizing in that the opponent, on viewing the enemy's counterforce arsenal during a crisis, may perceive his own nuclear force to be in imminent danger from an enemy first strike. Hence he may initiate (or will be tempted to initiate) a pre-emptive strike

when negotiations deteriorate because he believes that if he does not attack first his strategic force will be destroyed, before being launched, by a counterforce strike from the opponent.

Two minor arguments focus on détente and defense spending. Many writers believe that in this era of détente a deliberate attack by the Soviet Union is very unlikely. Therefore, because détente has seemingly obviated the need for strong defenses, continued force modernization is seen by some to be inconsistent and self-defeating. Furthermore, the current condition of strategic force parity, mutual assured destruction, the avoidance on both sides of explicit threats, and the mutual determination to preserve an atmosphere of détente have persuaded many that it is now safe to relax defense spending. Much of the opposition focuses on the high price we shall have to pay, on plea of a problematic threat, to provide for research, development, production, and operational costs of new, more sophisticated weapons of war. The opponents of defense spending want dollars saved from unneeded and costly new military systems to be devoted to domestic needs, for example, more and better medical and social programs.

*"Flexibility" arguments.* The argument concerning arms race inducements has a logical basis, but in reality, claims the "flexibility" school, the action-reaction syndrome is based on intuitive feelings as little hard evidence exists which demonstrates that the Soviet Union is impressed by American force initiatives to the point that it attempts to "mirror-image" United States modernization programs. A review of historical events reveals that the Soviets have sized their forces and modernized their weapons for reasons generally independent of American actions. Past behavior suggests it is unlikely that the Soviet Union would attempt to duplicate specific American modernization programs; students of Soviet arms policy gen-

erally agree, the argument continues, that the Soviets adopt policies, commit scarce resources to research and development programs, and expand strategic forces for reasons other than to copy American efforts in these same areas. They point out, for example, that the stimulus to the arms race must already have occurred, as evidenced by the current land-based missile force asymmetry. The American intercontinental ballistic missile (ICBM) restraint of the past few years did not succeed in constraining the Soviets from major expansion and modernization of their strategic offensive forces, and there is no guarantee that it will do so in the future. The "flexibility" school believes, moreover, that the United States must take advantage of new technology and strive to maintain qualitative superiority because quantitative expansions are counter to implied and explicit arms control agreements reached during SALT I and the Vladivostok discussions. These latter discussions essentially placed a lid on unabated force-building initiatives; therefore, an arms race in the uncontrolled sense is no longer a useful objective for either side. Furthermore, claims the "flexibility" school, taking advantage of inevitable technological advances to modernize forces is not a true arms race.

The "flexibility" side also takes issue with the "unthinkable" tag placed on limited nuclear exchanges. The more we broadcast that all nuclear responses are "unthinkable," the more the pragmatic Soviet leadership will be tempted to seek political advantage in those areas where the threat of total nuclear retaliation is not logical, hence not credible. If all nuclear responses are considered unthinkable, then surely forces that are structured exclusively for an all-out nuclear response, and a nuclear strategy that is limited to revengeful retaliation, are of no use for demonstrating resolve during a serious crisis. If the use of conventional-force options was unsuccessful in responding to a Berlin occu-

pation or a penetration of the Federal Republic of Germany—German Democratic Republic border by Warsaw Pact armies, should a nuclear fusillade be the only option open to the President? The Middle East offers further possibilities for such a confrontation. If our conventional forces are ineffectual at the lower conflict levels and it is unrealistic to launch the total nuclear force in response to a political probe or even a limited conventional intervention, could not this bring in question the credibility of a deterrent policy based solely on the use of those "unusable" forces? This is a dilemma the Soviet leadership may find beneficial to exploit, and, if so, the American decision-maker could find himself in a crisis situation where he has no options but to give in to the coercive threats of the Soviet Union or resist and demonstrate "resolve" by calling on the full destructive power of United States strategic forces. The mutual assured destruction posture, because of its suicidal nature, makes this second alternative highly irrational. It is on this repugnant note that the "flexibility" argument essentially rests.

The "flexibility" school disputes the argument that a counterforce capability produces destabilization with four counterpoints. First, both sides have nearly always possessed some counterforce capability, for in reality a counterforce target is any military target whether it be a soft airfield, depot, radar, or control center or, more to the point, a hardened missile silo, nuclear storage area, or launch-control facility. Second, regardless of the pre-emptive provocation, the side that attacks first must have extremely high confidence in the kill probability of its force or else must accept being left wide open to a counterattack from the enemy's many residual ICBMs, bombers, or submarine-launched ballistic missiles (SLBMs). Uncertain kill probabilities and unsolved technical problems (such as fratricide and dust and debris) raise serious doubts regarding the use-



fulness of engaging in nuclear duels. In other words, as between opposing strategic systems, while some counterforce capability is difficult if not impossible to avoid, a decisive first-strike capability is likewise difficult if not impossible to achieve. The third point is that any first-strike or pre-emptive plans must acknowledge that the enemy may adopt a "launch-under-attack" tactic. This in itself would essentially negate the anticipated disarming nature of a first strike. The final point advanced by the "flexibility" school is that, even if successful in destroying over 95 percent of the opponent's ICBM force, the pre-empting side would still be exposed to a retaliatory strike from the enemy's undamaged undersea missile force and alert bomber force. Questions concerning disarming first strikes or pre-emptive actions must consider the synergistic relationships of the total strategic force. For example, the compounding effects of the Triad of land- and sea-based missiles and manned bombers would make it almost impossible for the Soviet Union to contemplate, much less carry out, a planned, coordinated strike that could successfully destroy or negate all three components of our strategic nuclear force.

As for excessive defense spending and détente, the "flexibility" school acknowledges that such things as medical and social programs are worthy requirements. But the school also insists that the stark realities of the strategic arms competition, aggravated by continued inflation, oblige the United States to maintain or even increase levels of defense spending. Furthermore, states the argument, we must be careful not to become enchanted with détente. Regardless of surface relationships, a healthy skepticism of Soviet claims for peaceful coexistence is warranted as long as the Soviet Union continues with its major strategic force modernization programs. Prudence dictates that we adopt a pragmatic view and consider détente as a political or psychological tool used by both

sides and approach proposals for force reductions carefully. In sum, it is important to recognize that détente does not afford the United States the luxury of decreasing military strength unilaterally.

#### *the Soviet threat*

Because the purpose of any nuclear deterrent policy is to deter a perceived or known threat, the major threat factor should be considered when treating proposed alterations to this policy. Policy-makers can issue more useful guidance, and planners can better devise successful strategies if the attempt is made to understand the potential adversary's underlying politico-military philosophies and war-making capabilities. This scrutiny is relevant if we are to assess the Soviets' strategic force buildup during the past decade that has given them a level of forces far in excess of what is needed for a secure second-strike capability.

We know that the Russian view of the fundamental values of human life is different from the usual Western attitudes. A constant in Russian history has been, for most of her people, an existence on the edge of terror; it is a culture created by frequent chaos, the extreme tensions caused by stifling government controls, and the desire to survive. The Russians have lived with hunger, violence, unimaginable deprivations, the ever-present fear of secret police, exile to labor camps, and torture—these have become a way of life to the Soviet citizen whether under the Czar or Marxism-Leninism. The savage, prolonged purges under Stalin (during which as many as 15 million Soviet citizens may have died<sup>6</sup>) offer stark examples of the carnage that lurks in the background of Russian existence. Experiences such as these have produced a view of the world that cannot be perceived with any degree of confidence using American attitudes and experiences. Thus, it is likely that the current generation of Soviet

leaders does not have the same perspective of the world that American leaders have and is not likely to assess a crisis situation using the same criteria that we in this country might use.

Of most importance is the Soviet view of strength and power in the international arena. Given their firm belief in the decadence and corruption of capitalism, they are certain that the fall of capitalist governments is inevitable. Capitalism is still seen as the enemy of Marxism-Leninism, and the Soviets appear not to be completely confident that the capitalist states will not one day turn on the Soviet Union and seek to destroy it. At the same time, they remain convinced that time is on the side of Marxism-Leninism, that patience is a virtue; "adventurism" is to be avoided, but weaknesses can be exploited.

In the meantime the Soviets are striving for a higher ratio of strength vis-à-vis the capitalist societies. The Russian philosophy has always emphasized mass, whether it be in the size of armies or numbers of tanks, airplanes, missile forces, and soldiers. Any increase in quantity provides a qualitative change in the nature of reality, and superior forces are sought to enable them to overcome the inferiority by which they are still so obsessed. With nuclear forces, a superiority in numbers may present the Soviets with a new kind of military potential. If the Soviet strategic force becomes so strong that the correlation of forces shifts decisively in their favor, the West may no longer be able to withstand Soviet political initiatives. The Soviets are extremely conscious of power relationships; if they perceive the balance to have changed in their favor, they can be expected to seek political advantages.<sup>7</sup>

This is not to say that they will launch reckless military attacks; historically, they have not been reckless. Furthermore, they may believe overt military action to be unnecessary. Once the weaker non-Communist countries become convinced of the invincibility

of Soviet strategic might, if the United States appears to be at a disadvantage, the Finlandization of nearby non-Communist countries may well follow—the latter selecting their positions on international issues so as not to alarm or annoy the Soviets. If this occurs, the international political equilibrium may be fatally disturbed, with Soviet influence expanding as American influence wanes. The potential consequences are awesome. This may not be a brilliant plan, but, as evidenced by their philosophy and their continued buildup of military forces, it appears that this is the way the Soviet leaders see it.<sup>8</sup>

Given the Soviet determination to preserve what they have accomplished and to survive capitalism, it would be unrealistic to expect that the Soviets would invite disaster by initiating purposely all-out city-busting warfare. However, conditioned for struggle as they are, they may be less inhibited than we are about the employment of armed force for political purposes. Consequently, it would be imprudent of us not to recognize the possibility that the Soviets are better prepared than we are to employ military forces for political objectives. If this is true, we might presume that if nuclear war comes it will be initiated with a modest test as the Soviet Union seeks to manipulate enemy perceptions of resolve and will. This should not be an unexpected by-product of a superpower force imbalance; unless the United States can meet the Soviets on an equal-capability footing, we could expect a greater assertiveness from the Soviet bloc.

#### *"stability" versus "flexibility"*

As between the stability/flexibility arguments, the choice is not an easy one, in light of the threat discussed in the preceding paragraphs. Although the Soviet Union does not usually duplicate American military programs, arms competition is a real problem. As one nation perceives new strategic capabilities being incorporated by the other,



it is not unreasonable to expect the first to explore the feasibility either of obtaining the new capabilities for itself or of developing offsetting capabilities. Whether emerging technology or mere duplication is the stimulus, whether it means an antiship cruise missile for the United States or the first aircraft carrier for the Soviets, and multiple independently targetable reentry vehicles for the Soviets or a mobile ICBM for the United States, there is, and will continue to be, costly arms competition between the two superpowers. It is doubtful that unilateral efforts, based on sincere pleas that someone must be first to stop the "insane" arsenal buildup, will be successful alone in dampening the competition in arms. Unilateral cutbacks would only succeed in permitting the other side to grow stronger, and this is too great an advantage to give to the power-seeking Soviet government. As long as communism and capitalism are opposing political systems, each side will continue to modernize and improve its military forces in order to improve or strengthen its security position. As insane and costly as this may be, it appears that only through additional arms-limiting negotiations will there be any hope for real success in slowing or ending arms competition between the rivals.

The arguments against counterforce capabilities have been convincingly answered by the "flexibility" school. The relationship between LNO and a counterforce capability that threatens a disarming first strike would seem to be valid only if associated with active or passive defenses capable of thwarting all three components of the strategic Triad. It is highly improbable that this situation will ever occur as both sides are intent on seeing that perfect defenses are not developed, as evidenced by the antiballistic missile (ABM) agreement reached during SALT I. For flexible options, the President needs only a limited force; this point is important to LNO advocacy. A *small*, accurate,

and flexible offensive counterforce capability need not suggest an intent or capability to install a disarming first-strike force against the Soviet strategic forces. As emphasized previously, the relative invulnerability of the undersea force and the rapid reaction of which an alert bomber force is capable makes a first-strike tactic inconsistent with rational strategy even if the possibility of a missile launch-under-attack tactic is discounted.

Nevertheless, the fear that more strategic flexibility would make nuclear war more likely is certainly not entirely without justification. This is the most difficult objection to LNO to refute; if during a crisis a President's choices of actions involving nuclear weapons are not limited to unleashing the total strategic force, he may well be substantially less hesitant about ordering a nuclear attack, albeit one limited in numbers and expected damage. Conceivably he might do so in lieu of exploring all the diplomatic initiatives that could possibly dampen the situation. Even more disturbing is the possibility that, once nuclear exchanges begin, the tempo of the conflict would increase and uncontrollable escalation would be difficult to prevent. However, the threat of uncontrollable escalation also lends support to the case for LNO. Today most strategists are agreed that deterrence of nuclear war is not perfect; there is no guarantee that deterrence will never fail. If nuclear war does erupt, it is difficult to believe that the systems required for LNO (such as highly reliable sensors and command and control systems) and possessed by both sides would not aid in preventing escalation to massive exchange levels. The question, then, is whether the LNO capability will unacceptably diminish the inhibition to initiate limited nuclear actions.

#### *confrontation*

The most critical test thus far between the Soviet Union and the United States began in

October 1962, when reconnaissance photographs revealed that the Soviet Union was installing offensive ballistic missiles in Cuba. It is probable that the world came closer to nuclear holocaust during the subsequent 13 days than at any time before or since. In the end President Kennedy was able to convince Khrushchev and the Soviet leadership that American resolve to have the missiles dismantled and removed was such that even a shooting war was not too high a price. In retrospect it appears that American naval and strategic force strength provided the United States with sufficient politico-military leverage to convince the Soviets to back down and remove the missiles.<sup>9</sup>

There were cogent lessons to be learned from this remarkable episode. For American leaders the need to couple restraint with resolve probably was foremost. For the Soviets the lesson was also significant—a political venture in the international arena that is not backed by superior conventional and strategic forces is a bad risk. It appears to many analysts that this lesson had a catalyzing effect on Soviet force planners, and the missile imbalance that we face today may well have had its roots in the outcome of the missile crisis. It appears that since then the Soviets concentrated research and development efforts on what they knew they could accomplish first: a quantitatively superior buildup of their long-range strategic missile force. Their massive missile program has given them a superiority in both size and numbers of ICBMs, although not yet in numbers of warheads or accuracy.<sup>10</sup>

Recent arms control efforts have tended to put a roof on the continued buildup. SALT I was not an end in itself but the important first step of several that hopefully will reduce the competition between the superpowers. It was a political agreement as much as it was a military one in that both sides essentially agreed to mutual vulnerability—no real ABM defensive system was to be constructed

by either side. But the Soviets were conceded some advantages in missile throw-weight. The Vladivostok framework agreement between President Ford and Secretary General Brezhnev essentially placed an upper limit, a ceiling, on the aggregates of the central strategic system, but not before the Soviets had achieved a quantitative lead in missile forces.<sup>11</sup> Now, with a limit on numbers, quality becomes the stimulus rather than quantity. If throw-weight and yield increase and accuracy and reliability are improved, counterforce capabilities will result whether they are desired or intended. It will be unsettling if to all of their large throw-weight missiles the Soviets add multiple warheads with improved guidance and thereby gain a qualitative superiority as well.

#### *perceptions*

There is an aspect of power relationships that does not seem to be well understood in the United States; it centers on “political” or “psychological” advantages that are likely to be perceived by all actors involved—the Soviet Union, the United States and her allies, and countries of the Third World. International stability can best be served by a perception of an equilibrium of strategic forces as well as by fact. If American allies and friends, and neutral countries, perceive that the Soviet Union possesses a marked quantitative superiority vis-à-vis the United States, we can reasonably expect increasing doubt as to American capabilities to withstand Soviet political pressures. Possibly emerging from this would be an eventual weakening of our alliances as confidence in American resolve eroded. There is an additional consideration; qualitative inferiority is also significant and would add to the handicap of quantitative inferiority if both were present.

This concern is exacerbated if American leaders begin to doubt the utility of our own



strategic forces. The assured destruction philosophy is based on the fears associated with the awesome destruction that accompanies thermonuclear war. Whether we have convinced our potential adversary that nuclear war is too horrible to contemplate is a question we can never answer with any satisfactory degree of certainty. However, we may well have succeeded in convincing ourselves of this, and in a time of crisis we may become gripped by the paralysis of fear. If our missile force is considered to be more vulnerable and less effective than the Soviet Union's, we could lose faith in its deterrent value. Flowing from this could be a subsequent erosion of courage or resolve during any major confrontation with the "superior" Soviet Union. To counter this eventuality, we need a symmetry of capabilities to provide faith in our ability to meet each strategic blow with an equivalent, adequate, but prudent, counterblow.

#### *crisis management*

Is there any reason why we should be disturbed by an inequality of forces? Of what value is all of the nuclear power possessed by the two superpowers? That is, can this power be translated into useful political instruments for other than straightforward deterrence of an all-out first strike? How can these devastating forces be brought into play at the lower levels of political confrontation? Heretofore, the Soviets have fallen back on "rocket rattling" threats, and the United States has placed strategic forces on alert status, but then what? Because of the strategic realities of the "two scorpions in a bottle" situation, one can get only a limited amount of coercive mileage from tough attitudes that threaten mutual annihilation.

Today and in the foreseeable future the probability of a deliberate all-out nuclear exchange between the United States and the Soviet Union is very low. The decisive con-

sideration, however, is that the Soviets may find ways to use their expanding nuclear force for political purposes other than massive, instantaneous nuclear exchanges against urban-industrial areas. It is unlikely that the Soviets will challenge us directly, but there remains the possibility of the development of a crisis situation wherein the President may suddenly find himself contesting issues that both he and his Soviet counterpart consider "vital" to national security. Crises are likely to occur for unexpected reasons and may well be the result of client-state actions in the "tinderbox" areas of the world (World War I revisited?) and an inability on the part of one or the other superpower to control adequately his competing client state (e.g., the Middle East arena). It is possible that either superpower might initiate military intervention or provide direct military assistance to a client so as to prevent that client from being defeated. The other superpower may then attempt to counter participation by his opponent, and in subsequent negotiations he could miscalculate objectives and resolves and fall back on coercive threats backed up with missile rattling. If, in such a situation, the confrontation escalates to the point where the Soviets use or threaten to use nuclear weapons to coerce the United States, the President will need strategic-force options that do not involve either surrender or the high probability of mutual suicide. He will need a range of alternatives between the two extremes corresponding to the Soviet threats or actions; that is, the capability of threatening to respond or, if necessary, of actually responding with a limited nuclear strike against military targets. The most dangerous condition during a major crisis would be a unilateral capability for flexible options; for the United States to forfeit an LNO capability would provide the Soviets a trump card to play during a crisis and expose us to nibbling aggression. If it must be assumed that the Soviets will find that special-

ized nuclear capabilities are useful for demonstrating resolve and determination during an acute crisis, then the United States must also incorporate capabilities to use her strategic forces in something other than spasmodic exchanges. Indeed, if the Soviet Union recognizes that the United States possesses capabilities and plans for flexible responses, the Soviet leadership may be less likely, not more likely, to experiment with nuclear coercion; hence, the effectiveness of deterrence should actually be improved.

*LNO can provide  
"adaptive" deterrence*

The basic question confronting American leaders and policy-makers is twofold: (1) how to escape a nuclear paralysis if we find ourselves confronting Soviet conventional-forces victory or Soviet exploitation of its limited strategic operations capability, while simultaneously (2) minimizing the risk of uncontrollable escalation. The military strength of a nation during a crisis depends, in the final analysis, on capabilities and on resolution. The United States needs a deterrence posture that is *adaptable* and credible across the entire spectrum of military scenarios. This calls for nuclear weapons that can be used to threaten, and conceivably to carry out, carefully planned, long-range "demonstration" strikes.

The primary purpose for a small attack capability is to provide options short of an all-out nuclear strike that should aid in deterring the Soviets from using their counterforce advantages against this country as a means of coercion during a crisis. LNO forces then would be designed for a selective and flexible capability able to demonstrate: (1) an ability to make discriminate attacks, (2) a desire to avoid escalation, and (3) a resolve to avoid capitulation on enemy terms. The ca-

pability for LNO requires improvements in such areas as command and control mechanisms, secure communications systems, rapid retargeting capabilities, and improvements in current missile guidance systems. Suggested improvements are relatively inexpensive, and none of the proposed programs would be in violation of any arms agreements or would they require new missile silos. The concept of limited strategic nuclear options is directly related to our national security in time of severe crisis situation and is developed on the basis of our perception of the Soviet threat and corresponding capabilities designed to deal with that threat.

IN CONCLUSION, the theory of flexible responses—nuclear options—is not to be feared; thinking the "unthinkable" need not mean that nuclear war becomes more likely. On balance, a *mutual* superpower capability for LNO should tend to reduce the likelihood of a nuclear war rather than increase its likelihood. What is dangerously destabilizing to the superpower nuclear balance is a unilateral ability to employ nuclear weapons in a finite measure in order to blackmail or coerce the side that lacks a flexible response capability. Indeed, unilateral capability may induce the possessor to open the crisis game with a small nuclear strike designed to demonstrate resolve and determination to achieve perceived objectives. A response-in-kind capability possessed by both sides should discourage experimentation with nuclear gamesmanship by either side; deterrence of limited nuclear attacks becomes real, and the international political equilibrium is maintained and strengthened. What emerges from this is an unambiguous necessity to be able to deter a Soviet coercive strategy for the rest of this decade and on into the 1980s.

*Offutt Air Force Base, Nebraska*



## Notes

1. "President Richard M. Nixon's Message on Foreign Policy for the 1970's to the Congress of the United States, February 18, 1970," *Nixon: The Second Year of His Presidency* (Washington: Congressional Quarterly, 1971), p. 76-A.

2. "Report of the Secretary of Defense James R. Schlesinger to the Congress on the FY 1975 Defense Budget and FY 1975-1979 Defense Program" (Washington: U.S. Government Printing Office, March 4, 1974), p. 4.

3. Examples include Ted Greenwood and Michael L. Nacht, "The New Nuclear Debate: Sense or Nonsense?" *Foreign Affairs*, July 1974; Lawrence Martin, "Changes in American Strategic Doctrine—An Initial Interpretation," *Survival*, July-August 1974; and Stephen S. Rosenfeld, "The Rise of the Schlesinger Strategy," *Washington Post*, July 14, 1974. Also see *Orbis*, Fall 1974, for eight related articles by authors such as G. W. Rathjens, Donald R. Westervelt, and Colin S. Gray.

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7. For a scholarly discussion of the Soviet view on the use of nuclear weapons and their relationship to conventional warfare, see Dallas C. Brown, "Conventional Warfare in Europe—Soviet View," *Military Review*, February 1975, pp. 58-71.

8. For current Soviet politico-military philosophies, doctrines, and views, see *Marxism-Leninism on War and Army*; Colonel General N. A. Lomov et al., *Scientific-Technical Progress and the Revolution in Military Affairs*; V. Ye. Savkin et al., *The Basic Principles of Operational Art and Tactics*; A. S. Milovidov and V. G. Kozlov, *The Philosophical Heritage of V. I. Lenin and Problems of Contemporary War*; and A. A. Sidorenko, *The Offensive*, all translated and published under the auspices of the U.S. Air Force, Superintendent of Documents, U.S. Government Printing Office, Washington, 1970-1974.

9. For an easily read analysis of the Cuban Missile Crisis from the rational-actor viewpoint, see Elie Abel, *The Missile Crisis* (Philadelphia: Lippincott, 1966).

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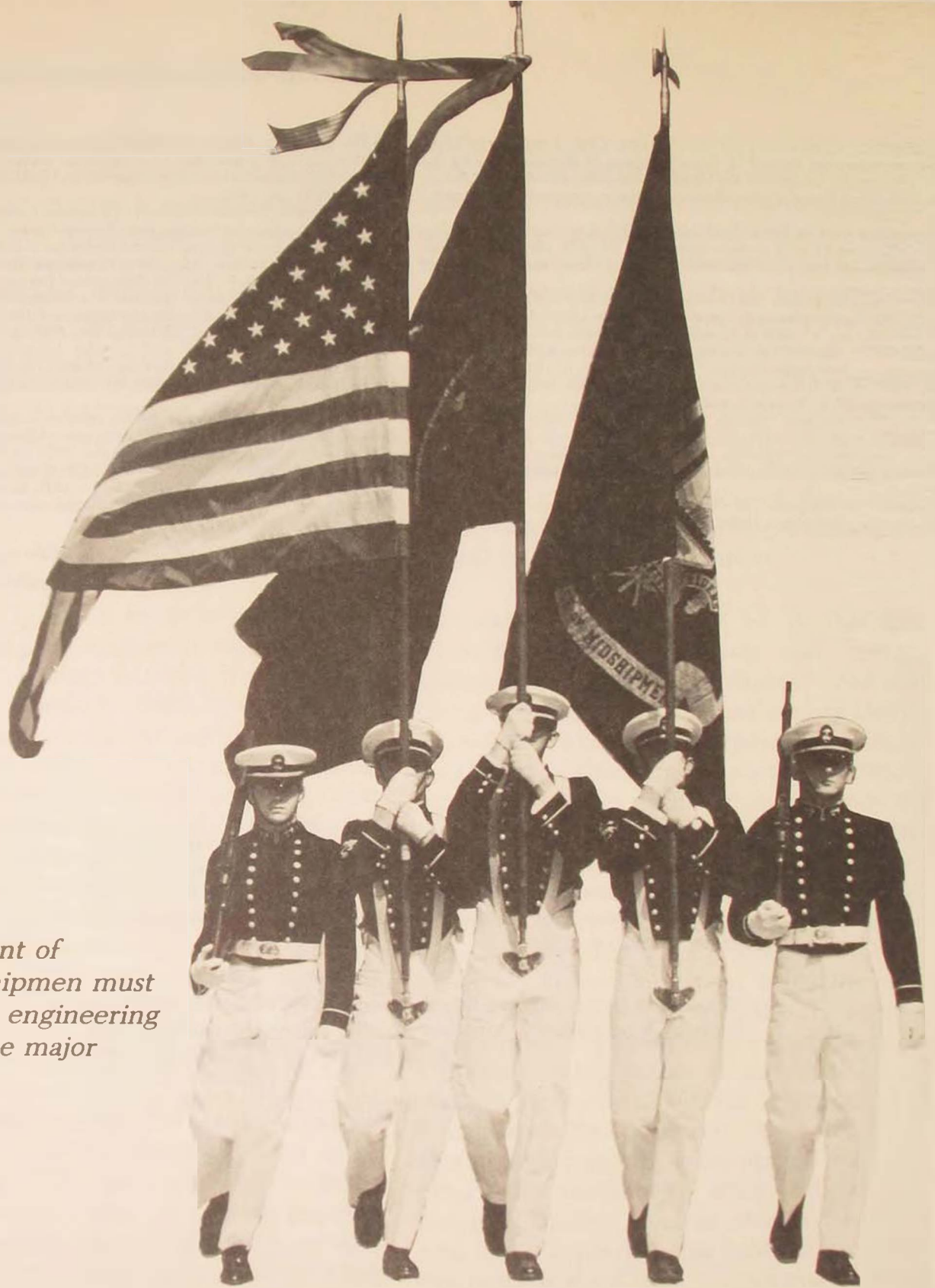
We not only need backup satellites, both in surveillance and communications areas, but we will probably also need in the not too distant future what one might call defensive satellites so that our surveillance and communications systems can be protected from potential attack.

We cannot forget that we live in a very insecure world and (that) there will be military purposes for that [Space Shuttle] system.

SENATOR HARRISON SCHMITT (R-N.M.)

Former Astronaut

*Defense/Space Daily*, 8 March 1977



*80 percent of  
all midshipmen must  
select an engineering  
or science major*

# CHANGING EDUCATIONAL GOALS AT THE UNITED STATES NAVAL ACADEMY

LIEUTENANT COLONEL JOSEPH J. BLUM



OF THE 16,294 young men who graduated from the United States Naval Academy (USNA) as members of the classes of 1949 through 1968, a total of 2142 elected to be commissioned in the United States Air Force (USAF). A comprehensive research study completed in late 1972 indicated that of this group, 1060, or about 49%, were then on active USAF duty.<sup>1</sup> Although no data are available to update these figures, it is reasonable to assume that a large number of these USNA graduates are still on active duty.\*

There is currently a high level of interest in, and interservice study of, the academic and professional training programs at the three service academies and at the U.S. Coast Guard Academy. While it would be inaccurate to assert that this interest and cooperation have not always existed, it is a fact that recent developments, especially involving activities of the DOD Committee on Excellence in Education (the so-called Clements's Committee, named for its chairman, W. P. Clements, Jr., Deputy Secretary of Defense) have accelerated this activity.<sup>2</sup> Because of the significant influence on current USAF policies and programs exerted by senior Air Force officers (including several USAF generals) who are USNA graduates, and in view of the current interest in academy curricula, it is instructive to examine the current Naval Academy academic program.

Of primary interest is that portion of the USNA program that is designed to meet the ever-increasing need for technically trained graduates. The changes that have taken place since 1968 have been so significant as to render the old, so-called "lock-step" curriculum experienced by pre-1968 graduates unrecognizable in terms of the majors that exist today. The current engineering pro-

gram is very strong academically, fully accredited, and benefits from an outstanding new physical plant.

#### *historical development*

The current USNA dedication to a strong engineering and science program is, in terms of the institution's 131-year history, a fairly recent phenomenon. The Naval Academy has often been described by critics as a "trade school"—because of its real or perceived emphasis on applied disciplines and practical training.<sup>3</sup> That view is reinforced by the charge given to the academic board by Commander Franklin Buchanan, the first Superintendent, when the Naval Academy was organized in 1845:

The course of instruction will be comprised under the following heads—Mathematics, Natural Philosophy, Chemistry, Gunnery, the use of Steam, Geography, English Grammar, Arithmetic, History, the French and Spanish languages and such other branches desirable to accomplishment of a Naval Officer as your judgment may dictate.

The implementation of this philosophy of training, designed to produce the "immediately employable ensign," resulted in development over the years of a curriculum that produced generations of outstanding naval leaders. The intent was not to produce renowned scholars.<sup>4</sup> The Naval Academy met changing technical and operational requirements in an evolutionary way; changes were always designed to meet the needs of the Navy while retaining the common educational experience considered by many to be essential for creating a cadre of dedicated and technically proficient officers.

The years after World War II through the late 1950s saw some course modifications and moderate shifts in emphasis, but it was a board of visitors report of March 1957 that served as the impetus for significant changes that took place in the Naval Academy curriculum beginning about 1959. Plans were

\*As a historical footnote, it should be stated that not many USNA graduates have been added to the USAF rolls since 1968. The author is aware of only two (one each from the classes of 1972 and 1976) who were direct USAF accessions. Except in very unusual cases, such Navy-to-Air Force transfers of graduates are not allowed.

approved that year providing for integration of several courses and for greater emphasis on underlying principles and fundamentals in technical and professional courses, rather than on current systems and material subject to obsolescence. The "pendulum was beginning to swing toward greater emphasis on academic effort," effort designed to provide a greater challenge to the brighter student and to go well beyond the scope of the prescribed curriculum.<sup>5</sup> The realization of this concept included the institution of validation, advanced elective courses, and overloading privileges. The first steps in what rightly has been termed an "academic revolution" in the Naval Academy curriculum had been taken.<sup>6</sup>

Even though significant curriculum advances had taken place in the early 1960s, two-thirds of the brigade of midshipmen were still taking the prescribed 164-semester hour curriculum. While these men were undoubtedly receiving a good, solid education, there was great concern that their education might not be adequate for the world of change that they would encounter in the 1970s and 1980s. Furthermore, the load of 164 hours was 20 more than required for most degrees in engineering, and no real opportunity existed for the kind of in-depth study that is generally recognized as a necessity in the professional development of engineering majors. Recognition of these deficiencies led to the development of a minors curriculum for the classes of 1968, 1969, and 1970 which included a 34-course core curriculum and an elective sequence of six courses. This program allowed for completion of a minor by every midshipman in one of 23 fields of concentration. This minors program was the genesis of the present majors program and included engineering study in aerospace, marine and mechanical engineering, naval architecture, and weapon systems. Science minors included applied science, chemistry, electrical science, and physics.

If development of a minors program could be termed the second phase in the evolution of the Naval Academy engineering program, then the third phase certainly is the implementation of the majors-for-all program. The development of the majors program in the years 1966-1969 was based on comprehensive introspection and courageous decisions on the part of innovative superintendents and educators. The majors program was established in September 1969 for the Class of 1971 and all subsequent classes. It was recognized from the beginning that significant emphasis needed to be placed on technical majors, in order to satisfy the expanding needs of the Navy for technically trained graduates.<sup>7</sup> Since the classes of 1971, 1972, and 1973 were on-board at the inception of the majors program, the Class of 1974 was the first class for which a goal defining a desired distribution of majors could be stated. This goal came to be known as the "40-30-20-10 split": 40% of each class in the engineering majors, 30% in mathematics and other sciences, 20% in the humanities and social sciences, and 10% in management.

The goal was not met by the Class of 1974; over 20% of the class selected analytical or general management majors and only 30% selected engineering. The development of a common plebe (fourth-class) year, curriculum changes, and a more-effective recruiting campaign resulted in majors selections by the Class of 1975 that very nearly matched the desired 40-30-20-10 split. Since the engineering and science majors are usually viewed as being equally efficacious in satisfying Navy needs, the goal was redefined in 1973 (for the Class of 1976) as being "70-30": 70% in the combined engineering and science majors and the remaining 30% in the humanities, social sciences, and management. The initial free-choice selection by the Class of 1976 resulted in a 69.8-30.2% split. Similarly, the Class of 1977 met





the desired 70-30 split, even though the humanities-social sciences majors were over-subscribed at the expense of the mathematics-sciences majors.

The desired distribution of majors for the Class of 1978 was influenced by a totally unrelated matter—that of visual acuity requirements! In response to the Superintendent's request to permit admission of more young men with eye waivers, the Chief of Naval Operations gave his approval, but with the caveat that the requested 10% increase of men in this category be used to increase to 80% the number of technical majors (science and engineering) in each class.<sup>8</sup> Thus, was born a new "80-20" requirement for majors selection, the same figure that is in effect today and which is unlikely to change in the foreseeable future. The distribution of majors for 1978 at 77.1-22.9% attests to the painstaking search for candidates. Since the desired 80-20 split was not achieved, it was decided to ask the 2.9% "overage" (38 midshipmen) to accept their second choice (which had to be an engineering-science major). Individual wishes were accommodated wherever possible, and ultimately, only two midshipmen raised strong objections.

The U.S. Naval Academy is now firmly and effectively committed to the 80-20 split, and the entire admissions-through-selection process is geared to this need. The current USNA Catalog states it very clearly: "The needs of the Navy require that at least 80% of midshipmen in each class be enrolled in engineering, scientific, or mathematics majors." Candidates are advised of this requirement before selection, and they are continually and forcefully reminded of it on several occasions prior to majors selection. That the process is working is evident from the fact that, when the Class of 1979 selected academic majors in March of 1976, 83.5% signed up for one of the 16 engineering-science choices. There were few complaints when they "missed" the 80-20 goal.

With this historical perspective, the majors program for the Class of 1979 can be described in greater detail, and the USNA engineering majors can be reviewed. None of the earlier USNA graduates who selected USAF duty would recognize the curriculum today.

#### *the current program*

The twenty-five academic majors available for selection by the Class of 1979 are shown in the following summary.





*Group I—Engineering*

Aerospace Engineering  
Electrical Engineering  
Engineering Physics  
General Engineering  
Marine Engineering  
Mechanical Engineering  
Naval Architecture  
Ocean Engineering  
Systems Engineering

*Group II—Sciences*

Chemistry

Management and Technology  
Mathematics  
Oceanography  
Operations Analysis  
Physical Science  
Physics

*Group III—Humanities and  
Social Sciences*

American Political Systems  
Economics  
English  
European Studies



Far Eastern Studies  
 History  
 International Security Affairs  
 Latin American Studies  
 Soviet Studies

There is some modification to this list for the Class of 1980. The number of majors available has been reduced to 18; the language programs are no longer identified as majors, and several majors, such as engineering physics and operations analysis, have been eliminated.

The 80-20 split required that 80% of the Class of 1979 choose majors from Groups I and II; the remaining 20% could choose from Group III. The actual free-choice selection came out as follows:

Group	Number	Percent
I	564	47.9
II	420	35.6
III	194	16.5

As mentioned earlier, few objections were raised to this result, although some faculty members are concerned because any further significant increase in Group I and II choices could adversely affect the viability of the Group III majors. This concern, incidentally, is shared as much by the engineering and science faculty as by instructors in the Group III areas. Since midshipmen enrolled in the engineering majors must take a total of 24 semester hours of humanities/social sciences courses, it is extremely important that majors in these areas remain "alive and well." The discontinuation of these majors would obviously (and quickly) affect the quality of both the humanities/social sciences faculty and courses, and the remaining majors would suffer for it.

#### *the engineering majors*

Probably no area of the Naval Academy curriculum has changed so dramatically over

the past decade as have the engineering majors. Many of the courses were developed (or at least significantly modified) during that period, initial professional accreditation was won, and completely new laboratory and classroom facilities were constructed. The engineering program is now very strong and is, to a very measurable degree, largely responsible for the significant increase in technical majors over the past several years. This is a noteworthy achievement in light of the confusion as to exactly what is meant by the term "engineering" at the Naval Academy. A former Superintendent stated it very well:

When many of us talk about engineering at the Naval Academy, we mean instruction in the operation and maintenance of machinery on board ship. More specifically, we are referring to an understanding of boilers, turbines, hot wells, surge tanks, feed pumps, electrical systems, and their interrelationships. This is important material for each Naval Academy graduate and much of my effort over the past four years has been involved with reinserting this sort of work back into our program. However, it has little to do with engineering education in its academic sense. If we are to produce graduates who have a reasonable grounding in the analytical aspects of engineering, we must be certain that we have sound programs in such areas as dynamics and statics, strength of materials, fluid dynamics, thermodynamics, and heat transfer. The engineering field has become so complex that some specialization is required. Those who would study in depth in the electrical and electronic fields must pursue a different program from those whose main interest is in, say, the mechanical or aeronautical fields.<sup>9</sup>

The Naval Academy has developed the "sound programs" Admiral Calvert called for. The best measure of that soundness is the fact that all those engineering programs listed for which accreditation was sought were granted this distinction. The national agency that conducts such reviews for all U.S. engineering curricula is the Engineers' Council for Professional Development (ECPD), which includes representation from 15 of the



most prestigious engineering societies in this country. The following USNA engineering majors received initial ECPD accreditation in the year indicated and still hold that distinction:

- 1970: Aerospace Engineering
- Electrical Engineering
- Mechanical Engineering
- Systems Engineering
- 1972: Marine Engineering
- Naval Architecture
- Ocean Engineering

There is no intent to achieve such accreditation for the major in general engineering; only one member of the Class of 1979 was permitted to enter it as an initial choice, and it is usually reserved as a fall-back position from the ECPD-accredited curricula.

There has been a steady increase in the numbers of midshipmen selecting the various engineering majors over the past several years. These numbers are shown in Table 1.<sup>10</sup> The catastrophic decrease in the strength of the aerospace engineering major that occurred between the classes of 1974 and 1975 reflected attitudes regarding the aerospace industry, and education in that area, which existed in 1971-1972 throughout the U.S.

The major has "gotten well," however, and has re-emerged as a midshipman favorite. The systems engineering major has also experienced unprecedented growth, which is somewhat remarkable in view of the low public awareness of this relatively new major. Only eleven ECPD-accredited systems engineering programs exist in the U.S.; the 45 men who graduated from the USNA in 1975 with that degree represented nearly 24 percent of the entire U.S. output!

While it might be instructive to examine each, or even several, of the USNA engineering or science majors in detail, space limitations obviously preclude such an analysis. However, the engineering majors have a significant amount of commonality so that it is possible, and perhaps worthwhile, at least to summarize the content of one of them.

*a representative engineering major*

The newest engineering major at the Naval Academy, and indeed in the U.S., is systems engineering. Any discussion of this major obviously should be preceded by a clear and

Table 1. Engineering major selections

Engineering Major	NAVAL ACADEMY CLASS								
	1971	1972	1973	1974	1975	1976	1977	1978	1979
	Midshipmen Selecting Major During Plebe Year								
Aerospace	92	91	125	120	28	64	64	76	89
Electrical	26	43	58	67	48	63	62	82	87
Mechanical	67	58	62	62	89	64	88	139	125
Naval Architecture	16	13	21	28	37	24	38	43	37
Ocean	15	17	56	93	86	48	55	82	74
Marine	14	17	13	24	30	30	28	52	64
Systems	29	22	35	29	60	53	58	59	76
General	-	-	-	-	24	9	5	6	1
Total	259	261	370	423	402	355	398	539	553





unambiguous definition of the term. It would be nice if such a definition existed; many very eloquent words have been written to describe the various curricula which carry this designation, but there is little agreement as to precisely what topics or subjects are common.<sup>11</sup> In any event, at the Naval Academy, it is meant to be an interdisciplinary major encompassing all the separate fields of engineering as well as the physical and, more recently, the social sciences. It involves significant analog, digital, and hybrid computer work and automatic control. In many U.S. engineering schools, this major might be viewed as a sub-set of electrical engineering.

The systems engineering curriculum, like all other USNA engineering curricula, has undergone significant change in the past year or so in the so-called professional course area. This area includes a number of courses designed to provide the midshipman with specialized training and education necessary for professional development as a naval officer. These professional courses are required of all midshipmen and are probably the closest courses in the current program to some of those studied by graduates of the old school. For the Class of 1980, the systems engineering major contains those major areas of study shown in Table 2.

In this major, as in most of the USNA engineering curricula, required study in mathematics extends one course beyond a formal course in differential equation theory. For systems engineering, this includes a course in probability and statistics. The engineering science group includes eight semester-hours of electrical engineering and 14 semester-hours of mechanical engineering. Required work in the basic sciences includes eight hours each of chemistry and physics (two courses in each area) and one two-hour course in digital computer programming. The professional courses in the systems engineering major are the same as those required in the other ECPD-accredited USNA engineering curricula and include navigation, naval science, leadership, seamanship and tactics, naval weapon systems, and law.

THE U.S. Naval Academy, like the academies of its sister services, was created in order to increase the professionalism of the officer corps.\* The continuing development of the curriculum over the years, culminating in implementation of the majors-for-all pro-

\*The need, however, was not nearly so dramatically illustrated in 1954 in the Air Force as it was in 1842 in the Navy. A near-mutiny at sea resulted in trial, conviction, and hanging of a midshipman and two enlisted men. Unfortunately, the midshipman was the son of the Secretary of War!

Table 2. USNA Systems Engineering major

Area of Study	Semester-Hours of Study by Semester								Total
	1	2	3	4	5	6	7	8	
Mathematics	4	4	3	4	3				18
Other Basic Sciences	6	4	4	4					18
Engineering Sciences			5	3	4	7	3		22
Systems Engineering, Required				3	6	6	3	4	22
Systems Engineering, Elective							6	6	12
Humanities/Social Sciences, Required	6	6				3			15
Humanities/Social Sciences, Elective			3				3	3	9
Professional	3	4	3	5	6	3	2	2	28
Other Electives								3	3
<b>Total</b>	<b>19</b>	<b>18</b>	<b>18</b>	<b>19</b>	<b>19</b>	<b>19</b>	<b>17</b>	<b>18</b>	<b>147</b>

grams, has always been designed to accomplish this objective. In today's environment, in all the services, a need for professionalism equates to a need for the best technical training possible. The engineering majors are eminently well-suited to this goal. An ECPD-accredited engineering degree is visible recognition of the attainment of a high level of technical achievement; it is a benchmark against which the quality of an institution's graduates can be measured. It is small wonder, then, that the Navy and Air Force assiduously guard the integrity of their academies' engineering degrees. While this

emphasis has sometimes created potential conflicts between technical education and professional training—the "balance between Athens and Sparta" as a previous USNA superintendent described it—the academies must remain, above all else, engineering schools.<sup>12</sup> The dedication and professionalism of the Spartan are necessary requisites for military and naval success, but the scholarly and intellectual depth derived from successful pursuit of a tough technical major represents modern-day Athenian virtues on which that professionalism can be built.

*United States Naval Academy*

#### Notes

1. Lieutenant Colonel R. J. Lucas, USAF, and Major W. E. Hodge, USAF, "The USNA Graduate in the Air Force," *Shipmate*, vol. 36, no. 10, November 1973, pp. 34–38.

2. Deputy Secretary of Defense Memorandum to the Departments of the Army, Navy, and Air Force, Subject: The Service Academies: Conclusions and Initiatives, 28 April 1975.

3. Professor John D. Yarbro, "USNA Curriculum Development," revised edition, January 1974.

4. Rear Admiral R. W. McNitt, USN (Ret), "Challenge and Change, the Naval Academy: 1959–1968," *Shipmate*, vol. 35, no. 4, April 1972, pp. 3–6.

5. *Ibid.*, p. 3.

6. Yarbro, p. 5.

7. Dr. Bruce M. Davidson, Academic Dean, USNA, "Who Takes What?" *Shipmate*, vol. 38, no. 8, October 1975, pp. 33–35.

8. CNO Memorandum to USNA Superintendent et al., Subject: Visual Acuity Requirements for Entrance to the USNA, 9 January 1974.

9. Vice Admiral James Calvert, USN, "Thoughts upon Conclusion of a Four-year Tour," *Shipmate*, vol. 35, no. 4, April 1972, pp. 7–9.

10. *History*, United States Naval Academy, Division of Engineering and Weapons, 1 July 1975–30 June 1976.

11. Lieutenant Colonel J. J. Blum, USAF, "An Introductory Course in Systems Engineering," *Engineering Education*, vol. 65, no. 3, December 1974, pp. 238–41.

12. Vice Admiral James Calvert, USN, "The Fine Line at the Naval Academy," *Naval Institute Proceedings*, vol. 96, no. 10/812, October 1970, pp. 63–67.

Editor's note: The article reflects data available as of July 1976.

A decision is the action an executive must take when he has information so incomplete that the answer does not suggest itself.

ADMIRAL ARTHUR WILLIAM RADFORD  
Chairman, U.S. Joint Chiefs of Staff (1957)



# R books and ideas



## AMERICAN DEFENSE POLICY, 1945-1977

### *A Review Essay*

ROY A. WERNER

**D**EFENSE, like all political language, is a euphemism. It imparts a neutral tone to the ugly reality of conflict. Reviews of five books that are concerned with the formulation of U.S. defense policies, the impact of allies on those policies, and what forces might shape future defense policies are presented in this article. Because policy decisions are always part philosophy and part exigency, it is important to understand the constellation of forces that interact in the policy formulation process.

In 1945 many hoped that the cooperation of the Allies might carry over into a peaceful international system. Spheres of influence, however, were soon established, and the division of Germany made bipolarity a fact. The international system again became a

world of competing alliances and weapons. Stung by Soviet actions culminating in the 1948 Berlin blockade, the U.S. returned to conscription, and the spiral of military competition emerged. These developments, coupled with the inevitability in a pluralistic democracy of both defense policy and the defense budget being products of political competition, combined to create the postwar environment in which decisions were made.

Although the policy debates in pre-Korean days are notable for the absence of heavy civilian involvement, the constant theme of "who gets how much money for what missions" does appear. The military services themselves were the primary actors before 1950. In 1948 a Presidential Commission on Air Power argued that although bombing might not win the next war, it could prevent losing that war. In 1949, General Omar Bradley asserted that one must first blunt the enemy attack, then mobilize and deploy the Army to win the crucial land battles. General Hoyt Vandenberg, meanwhile, believed that air power would weaken political resolve. But President Truman obviously disagreed and partially impounded funds for "excessive" air wings. The Navy criticized the B-36 and its atomic strategy with Admiral Arthur W. Radford reminding us that the atomic blitz was not an effective deterrent. The only significant civilian involvement, aside from the White House, came with George Kennan and his containment concept which furnished the intellectual rationale for policy-makers.

These early policy debates naturally involved the allocation of resources. As early as May 1946, Truman had declared that the FY 1948 military programs "could have one-third of the funds remaining after the fixed [domestic] charges had been met."<sup>1</sup> By the spring of 1950, however, the National Security Council had noted the sharply increased Soviet capabilities and recommended immediate corresponding U.S. increases. Tru-

man held firm against the recommendation until the outbreak of Korean fighting made the issue obsolete.

### Strategy

Now a provocative book† by a British scholar, Robert E. Walters, argues that the U.S. committed two basic mistakes in its post-World War II policies: first, we allowed military strategy to determine overall policy; and, second, this “mistaken” nuclear strategy produced the wrong policies. The author holds that American policy-makers unwittingly married the heartland theory of Sir Halford J. Mackinder to nuclear deterrence. However, contrary to his statement, the author does not prove his theory “by analysis and reasoning.” Secretary of Defense Louis Johnson cut back pre-Korean force levels because of the American nuclear monopoly and a desire to save money. This same concern for dollars, the failure of the NATO alliance to meet the 1953 Lisbon manpower goals, and the overwhelming Soviet conventional superiority led to the adoption of a series of defensive strategies centering about the uncertainty of nuclear release. The key determinants were clearly budgetary constraints and manpower levels. Moreover, Walters seems unable to comprehend that deterrence existed long before nuclear weapons ushered in our revolutionary epoch. Many readers will agree with the author that a balance of power is desirable and that NATO needs greater maritime strength. However, the recent Soviet growth in air power assets is ignored. More fundamentally, Walters fails to explain how control of the Atlantic affects tank battles on the Central Front. Sea control is vital but, as the Chief of Naval Operations notes, only in a NATO war lasting more than

three weeks.<sup>2</sup> Finally, contrary to Mackinder's original theory, the heartland is now accessible to nuclear intercontinental ballistic missiles.

Walters's work is often irrelevant to its central theme (still, the chapter on the blitzkrieg is excellent). Nevertheless, the world is entering a new maritime era where oceanic natural resources, strategic deterrence, and the natural rivalry between states will make the seas critically important to all. Perhaps the most interesting segment of the book is the discussion of the new capital ship, a nuclear underwater vessel. Even though the idea is old, Walters's treatment is lively and informative. One suspects that in the near future Admiral Hyman G. Rickover will also quote Sir Julian S. Corbett, a turn-of-the-century British naval strategist, who said the major problem in naval history is “reconciling sea endurance with free movement.”

### Allies

If, then, Walters is wrong and our resources dictated our foreign policy and American military strategy was derived from a grand strategy, the paramount issue of the early postwar years was how to treat our defeated enemies. Both Germany and Japan were judged to be capable of resuming aggressive actions. Thus, to allow demobilization while fulfilling occupation duties demanded a political strategy incorporating significant political, economic, and military elements. Policy toward Japan was clear—disarmament, demilitarization, and democratization. Policy toward Germany was, of course, more complex given the Cold War and the later realization of the need for German military manpower.

Alliance politics inevitably imposes limita-

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†Robert E. Walters, *Sea Power and the Nuclear Fallacy: A Re-evaluation of Global Strategy* (New York: Holmes and Meier, 1975, \$10.95), 215 pages.



tions on the freedom of all members. The United States first encountered these limitations with Germany and, more recently, has witnessed these mutual constraints in dealing with Japan. Although the Federal Republic of Germany (FRG) renounced possession of nuclear arms in 1954, Chancellor Konrad Adenauer's insistence on equality within the alliance made nuclear sharing a constant domestic and alliance problem between 1954 and 1966. Solutions such as the Multilateral (nuclear) Force (MLF) were advanced, and eventually the Nuclear Planning Group (NPG) granted Germany the prestige of full partnership and enhanced diplomatic flexibility.

In an obviously academic work, Catherine Kelleher richly describes the German experience of these years and relates it well to broader international events.† For example, she notes that in 1948 General Hans Speidel argued that German feelings of military inferiority would make them a weak link in the Western defensive system. Full rearmament, however, was clearly unacceptable to our British and French allies. Thus, the creation of a nuclear weapons advisory committee became the solution. Yet today the NPG still obscures basic policy differences between the allies. The desire of the FRG is to halt the war at the border. Their reasoning is obvious: if the nuclear threshold is passed, better that the release occur on the frontier instead of deep in German territory since more than fifty percent of the work force is within eight hours of the border by armor column. Nevertheless, the resolution of the nuclear sharing issue has freed German foreign policy—as is evident from the earlier efforts at *Ostpolitik*

and the 1976 initiative on international terrorism at the United Nations (the first major FRG international action). Contrast this to the increasing difficulties faced by America and Japan in recent years: military bases, American-imposed fishing reductions in U.S. waters, the “two Chinas” problem, the issue of whether Japan should assume additional defense responsibilities, and now a clash over nuclear reprocessing. Clearly, the early occupation years dramatically affected the Japanese.

The three most commendable essays in a volume edited by a former Army officer, James Buck,‡ clarify the impact of the occupation: the absence of a viable military tradition; the continuing urbanization that further shrinks the manpower recruitment pool; and the patterns by which antimilitary opinion is formed within the culture. Despite the success of our policies promoting pacifism and discrediting the *gumbatsu* (military clique), the present Director General of the Japanese Defense Agency (JDA), utilizing his talents and credibility as a former minister of education, is beginning to change attitudes. Now in Japan one can encounter public discussions of defense issues. Further, the September 1976 translation of the latest JDA “White Paper” hints at the Soviet maritime threat—something never before done by a government unwilling even to discuss threat perceptions. The importance of such shifts in societal attitudes has been made clear by Zbigniew Brzezinski in discussing the impact of possible American attitudinal shifts that make it “almost axiomatic that an isolationist U.S. will definitely create a nationalist and militarist Japan.” The mainte-

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†Catherine McArdle Kelleher, *Germany and the Politics of Nuclear Weapons* (New York: Columbia University Press, 1975, \$15.00), 372 pages.

‡James H. Buck, editor, *The Modern Japanese Military System* (Beverly Hills, California: Sage Publications, 1975, \$15.00 hardback, \$7.50 paper), 249 pages.

nance of alliance cohesion is indeed in the best interests of America, her allies, and regional stability.

### Eisenhower under Attack

Eisenhower continued the Truman policy of a ceiling on defense spending and proceeded to finalize a network of regional security treaties. Events, however, forced increases in defense budgets. Defense spending rose, in constant 1954 dollars, from a 1950 figure of \$16 billion to a 1954 high of \$41.2 billion, before leveling off at about \$38 billion annually for the remainder of Eisenhower's term.<sup>3</sup>

The *Sputnik* launching in 1957, however, destroyed Ike's hopes for a "long-haul" defense budget that avoided the peaks and valleys of pre-Korean days. Although the Eisenhower administration never added substantial new funds, the dissent caused by the Soviet space success made possible rapid increases in the early sixties. Individual military dissenters found civilian allies and attacked the administration policies. Superb coverage of this crucial 1957-1960 period is found in Richard Aliano's book.† His work also subjects the various "process theories" (Huntington and Janowitz on the military, Fenno on Congressional committees, Cohen on the press) to examination, and the theories stand the test well. The analysis of the shift from massive retaliation to flexible response concludes rather obviously that strategic policy formulation is a "social rather than an intellectual process, involving myriad interests and opposing values and their conciliation."

The reality of this social process was clear when Senate Majority Leader Lyndon B. Johnson called *Sputnik* "today's scientific

Pearl Harbor," and the avalanche of criticism began. Even a "cold warrior" *New York Times* editorialized in support of a crash program to "assure our superiority in missiles." The only commonality among the critics was a desire for change.<sup>4</sup> "Innovators" such as Maxwell Taylor, Hyman Rickover, and James M. Gavin, influenced "popularizers" such as the Alsop brothers, John Finney, and Hanson Baldwin. Both categories of people found their ideas and arguments articulated by "capitalizers" such as Senators Johnson, Symington, and later Kennedy, for political advantage. However, those senators, each seeking the Presidency, were guilty of the same error often committed by legislators today—an emphasis on defense budgetary issues to the exclusion of the relationship between defense and foreign policy. Indeed, the weakest chapter in Aliano's book concerns precisely those civilian theorists who raised such troublesome points: Brodie, Kahn, Kaufman, Kissinger, Osgood, Wohlstetter. The chapter merely strings together their quotes devoid of any analysis. Are men of ideas blind to the transfer problems of academic models to policy prescriptions? How do scholars deal with conflicts of loyalty—truth or partisan political advantage? Why did the renaissance of the fifties, the power of these "action-intellectuals" in the sixties, lead to the doubting of their contribution in the seventies?

### A New Era

Pax Americana ended in 1973. Now we are groping for an uncertain future. Because diplomacy must attempt to influence events before core security interests become predominant, the essays assembled by

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†Richard A. Aliano, *American Defense Policy from Eisenhower to Kennedy* (Athens: Ohio University Press, 1975, \$13.50), 309 pages.



Professor Richard Rosecrance deserve careful reading.† The premise of this volume is that the era of American hegemony is over but that the United States now enjoys a greater maneuverability in foreign policy as contrasted to those earlier years. The basic lesson, according to Rosecrance, is simply "If American forces are engaged in any conflict . . . the encounter must be short and decisive." Such analysis followed Korea and was forgotten in Vietnam except by General Giap. Yet, Rosecrance's formula needs an addition—can America successfully make war without going on a moral crusade? Our renewed emphasis on short war strategies in Europe and Korea would indicate that many are concerned that the answer is negative. Even here, however, there exist bedeviling questions: What is in the national interest? What is the role of tactical nuclear weapons in escalation options? Thus, our immediate future should be devoted to re-establishing a basic consensus on these points, for in a democratic society strategy must rest on what is possible.

The single area where the American public has become more aware is the increasingly important economic dimension. Robert Gilpin, in a lucid piece included in *America as an Ordinary Country* illustrates how political economy should be written. He links economic and political change and then formulates a pattern of how such changes may affect political decisions and governmental policies toward multinational corporations (MNCs). The Assistant Secretary of Treasury for International Affairs, C. Fred Bergsten, supplements that analysis with a selection emphasizing the U.S. need to redress likely future imbalances by MNCs—at U.S. expense—toward their hosts in developing countries.

Geographically, an essay by François Du-chene presents a role for the European Community as a regional resource in crisis management situations. Cyprus, however, proves that the community needs improvement to reach such a position. Brigadier Hunt then develops a mediocre essay on the Far East that fails to weigh the Taiwan issue adequately, given the security treaty which makes a "Japanese solution" of trade feasible but diplomatic recognition more difficult. Hunt ignores his Commonwealth neighbors, Australia and New Zealand, while doing a slightly better job on the regional impact of possible American withdrawals from South Korea, recognizing that the mode of disengagement is all important.

The gem of the Rosecrance volume is the display of argumentative reasoning by Coral Bell. She contends that the benefits of détente outweigh its costs. "Détente is a stragem for the management of adversary power which aims at securing the essential power interest of America and maintaining its essential diplomatic competitiveness at less than exorbitant costs." This relationship between "enemy brothers," to use Raymond Aron's phrase, is, she believes, a safety net which insulates the superpowers from regional disasters such as the 1973 Middle Eastern War. Bell argues that détente is worth the slight risk of Soviet economic gain, especially given the greater leverage gained by the U.S. from playing on the Sino-Soviet dispute. Of course, the critical unstated assumption is that the Western powers are not lulled into a false sense of security. Recent Soviet pronouncements make clear that détente is but a continuation of earlier peaceful coexistence tactics. One also wonders if an expert on the Soviet system would contend

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†Richard Rosecrance, editor, *America as an Ordinary Country: U.S. Foreign Policy and the Future* (Ithaca, New York: Cornell University Press, 1976, \$9.75), 276 pages.

that these economic gains will serve to focus the leadership more on the satisfaction of material desires or simply allow them to expand military capabilities? It is a pity that the editor did not seek such a contribution.

OUR FUTURE, however, will assuredly see increased linkages between international events and domestic political struggles. The theater of international politics has one pervasive factor, its own interdependence: rapid population growth in developing countries; a widening gap in the economic standing between rich and poor nations; dwindling supplies of energy and agriculture; and, perhaps most significantly, the lengthy periods required for scientific advances that may help alleviate such problems. Thus, shifting international coalitions, greater intrusion of domestic politics into foreign policies, a declining (but still necessary) utility of military force, multiple channels for influencing world events, and the intertwined nature of these problems, all combine to force a new agenda on statesmen.

The critical issue of nuclear nonproliferation illustrates these new trends. American policy is creating disagreement with traditional allies over nuclear supply issues. This situation is then further complicated by the desire of other states to acquire these weapons for security and prestige reasons, despite the limited utility of such weapons. Nonproliferation, thus, cuts across a mix of economic, political, and military issues. Deterrence, for example, may be impossible in the year 2000 if a state cannot identify who launched a nuclear attack because of the proliferation of such weapons. In such a world no reprisal makes sense unless one is willing to unleash the spasm of total nuclear conflict. How, then, are leaders to formulate defense policies?

Future policy implementation will demand both cross-national actions and new international institutions. Yet there is no way to ignore the truth, "Threat systems are the basis of politics as exchange systems are the basis of economics."<sup>5</sup> Policy-makers and those governed by them cannot afford illusions.

Washington, D.C.

#### Notes

1. Samuel P. Huntington, *The Common Defense* (New York: Columbia University Press, 1961), p. 42.

2. Admiral James L. Holloway III, *Hearings: Department of Defense Appropriation Fiscal Year 1976*, part 3, 1975, p. 197. Note especially the favorable assumptions that convoys were formed prior to the outbreak of war and that they encounter no hostile forces.

3. Indeed, from 1950 until 1969 the administrations always received

either the amount requested for defense or, not uncommonly, even more dollars.

4. Conventional wisdom often fails to consider a later press conference in 1954 in which John Foster Dulles stated that massive retaliation was a "capacity," not a policy. Hence, the doctrine quickly became one of selective retaliation. Further, few note the beginnings of both the Polaris and Minuteman programs in the Eisenhower administration.

5. Geoffrey Blainey, *The Causes of War* (London: Macmillan, 1973), p. 31.

We view our command, and all our military forces as but a part—a single thread in the total fabric of the society that nurtures us. We have no needs beyond the needs of that society—what the citizens of the United States want from their strategic forces.

GENERAL RUSSELL E. DOUGHERTY, USAF  
Commander, Strategic Air Command



## POTPOURRI

**The Superwarriors: The Fantastic World of Pentagon Superweapons** by James W. Canan. New York: Weybright and Talley, 1975, 375 pages, \$12.50.

The pendulum of public opinion regarding the military seems to sway back and forth. Current support for a record defense expenditure indicates that we may have "turned the corner." Yet, it was less than twelve months ago, in the aftermath of Watergate, that aspiring journalists and public figures set out to conduct a "national purification." Such agencies as the FBI, CIA, and others were subjected to increased scrutiny.

In light of all these activities, it seems apparent that the Department of Defense came out of the investigations in fairly good standing. However, some "hits" were taken in books such as *The Superwarriors: The Fantastic World of Pentagon Superweapons* by journalist James Canan. This work has two themes: first, the Pentagon is supposed to be procuring a multitude of unnecessary superweapons; and, second, (and most disturbing) interservice conflict has driven the Department of Defense into a series of grave fiscal and operational sins.

Mr. Canan uses the Pentagon's superweapons as foils to launch an attack on interservice competition and to accentuate Joint Chiefs of Staff differences with their civilian superiors. Though many may accept some of the allegations, taken in the proper perspective, these rivalries should sometimes be considered as healthful and perhaps even necessary. Interservice differences of opinion among the past, present, and future Secretaries of Defense and the Joint Chiefs of Staff are not necessarily based on any competition for authority or funding advantages but, more like-

ly, on what each feels is the best approach to national security. In this regard, Mr. Canan has done us a disservice by concentrating on the negative aspect of things.

*The Superwarriors* also suffers from technical inaccuracies that may be a result of oversimplification and condensation more than anything else. Controversies such as the squabbles over the F-14 and F-15 are reduced to simple terms and do not take into account the hard realities that each service has had to consider in planning for its future missions and operating conditions.

Still, some of what the author says is interesting and provocative. Perhaps this is the greatest value of the book: it gives us a picture of the way in which some of those outside of the Department of Defense view the organization. Whereas many professional officers will find weaknesses in the book, it is nevertheless worth reading just to get another view from outside the establishment.

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**Out of the Blue: U.S. Army Airborne Operations in World War II** by James A. Huston. West Lafayette, Indiana: Purdue University Press, 1972, index, xi + 327 pages, \$10.00.

For the thoughtful armed forces officer, this is a disturbing book, detailing the creation and use of American airborne forces in World War II. Though James Huston surprises and disappoints the reader, in the end he performs valuable service by providing perspectives that enrich professional judgment. The book is a useful case study in deci-

sion-making for those seeking preparation for wartime crises of rapidly changing technologies, industrial trade-offs, and strategic options.

Huston disappoints the reader by his uneven handling of operations and other subjects. He goes to great lengths in discussing Operation Market-Garden but gives Pacific-Asian exploits only brief coverage. While he explains the American prewar concept of airborne forces as the use of small detachments of demolitionists placed behind enemy lines, he neglects the rather significant contribution of the use of both parachutists and air supply techniques Office of Strategic Services during the war.

The author is at his best in describing the rather surprising trade-off between strategic bombing and airborne forces in the European theater, a controversy that placed Generals Eisenhower and Marshall in opposite corners. Huston points out that, despite its low priority, by 1945 American airborne capacity could have projected, and likely sustained, a force of ten infantry and airborne divisions deep in enemy territory. However, the dedication to strategic bombing severely retarded the growth of airborne potential. Perhaps the most important result was that airborne forces never had a suitable combat aircraft designed for their use. American airborne units went to war with a great millstone because of the resulting limitation: a crippling lack of ground mobility and firepower once they had landed behind enemy lines—the natural consequence of the strategic bombing priority.

The author concludes that, since airborne was denied a strategic role, it was destined to be used as a tactical adjunct to other forces, usually relegated to securing bridgeheads or preventing enemy reinforcement. Unfortunately, Huston does not take a stand. His sources suggest that he has done more research in this field than any other historian, but he deprives the reader of his judgment. One cannot read the book without wondering if the author believes airborne forces deserved a bigger claim on the limited resources of World War II America. The sav-

ing grace is that there is enough in *Out of the Blue* to enable the reader to develop an informed opinion.

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**The Shah: The Glittering Story of Iran and Its People** by Edwin P. Hoyt. New York: Eriksson, 1976, 244 pages, \$10.00.

Since Edwin Hoyt has chosen to give me the benefit of his prejudices in his book, *The Shah*, I feel justified in giving him mine in this review. The book reads like a *Reader's Digest* compendium of irrelevancies artfully strung together to give the impression of thorough research and penetrating analysis. It is neither. Rather, the book is an attempt to elevate facile journalism to the level of serious historical writing without sacrificing any of those delicious tidbits from the Shah's personal life that might titillate the reader and justify the book's subtitle, *The Glittering Story of Iran and Its People*. Sad to say, Mr. Hoyt has once again proved the old adage that "all that glitters is not gold."

Our story begins as the author lands in Teheran to write his book and is confronted by the great cliché of modern Middle Eastern life: the juxtaposition of the Old and the New. Thus, the scene is set, metaphorically speaking, for the rest of the book. By means of a series of flashbacks, we glimpse the flowering of the Modern Imperial Idea as the old Shah, Reza Khan, schools his son Muhammad, soon to be the Shahinshah, the Light of Lights, in the art of Oriental statecraft. We ponder whether this young man of ascetic and religious proclivities can bridge the gap between the East and the West, the Traditional and the Modern, and in his person bring Iran into the twentieth century. Old Reza Khan, autocratic, cruel, and despotic but burning to become the Ataturk of the Persians, must pass this burden to his son and go into exile, the victim of Great Power machinations. Will the new Shah make it? Can there be any doubt? And in the meanwhile,



Muhammad Reza will make it with a succession of lovely Shahbanous and royal mistresses, all slim, dark-eyed women with impressive bosoms.

Mr. Hoyt, however, does not allow us the luxury of dwelling too long on the Shah's indiscretions. After all, sexual service in the cause of dynastic continuity is a burden to be borne by all heads who wear a crown. The real problem for the Shah is not the production of an heir but an Iranian bourgeoisie, insensitive to the need for change, a military caste victimized by its own immobilism, a lachrymose Prime Minister Mossadegh who would make a pact with the devil if only to overthrow the monarchy, a reactionary class of Islamic mullahs, a nihilistic Marxist movement, and the rapacity of the superpowers in their quest for absolute control over Iranian national resources.

The Shah survives, of course, by combining the ability to coerce men, learned at his father's knee, and his unerring faith in a grand design for Iran. Although Mr. Hoyt seems to admire the exercise of dictatorship in the interests of modernization, he wonders at the end of his book if perhaps time will not catch up with the Shah before the reconciliation of the Old with the New is realized. We may wonder at this, too.

As an inquiry into serious questions of Iranian history and political directions, I can hardly recommend this book. Moreover, *The Shah* may be positively dangerous in the hands of a reader seeking information about Iran but incapable of applying critical intellect to his reading. Nevertheless, as a historical potboiler the book does have some merit and will no doubt find its place with an unsuspecting public.

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**New Civil-Military Relations: The Agonies of Adjustment to Post-Vietnam Realities** by John P. Lovell and Philip S. Kronenberg. New Brunswick, New Jersey: Transaction,

1974, xiv + 340 pages, \$14.95 hardback, \$3.95 paper.

This book has a rather misleading title for a work that has little to do with the nitty-gritty of military-civilian interaction. Actually the volume is largely a collection of papers, first presented at the 1971 Inter-University Seminar on Armed Forces and Society, which deal primarily with the issues of foreign and military policy formation. Accordingly, the reader might expect the topics in each chapter and the approach taken by the various authors to be somewhat unrelated, and this is generally true. Although coeditor John Lovell does an admirable job of attempting to knit the pieces together in his extensive introduction, continuity frequently just does not exist. The articles themselves are a mixed lot. Some are quite good, but most contribute little that is new to the study of civil-military relations.

A number of the articles provide excellent food for thought. For instance, John Lovell, Edwin Fedder, and Davis Bobrow have written chapters explaining that our present foreign/defense policy is based on premises that no longer exist, and each supplies some evidence to substantiate his position. Bruce Russett offers a piece concluding that public and Congressional permissiveness toward defense spending—an attitude that he maintains has become a national tradition over the past 30 years—no longer exists in the aftermath of the Vietnam war. Vincent Davis reviews the question of the willingness of Americans to serve in the armed forces; he asserts that, while U.S. citizens have always been reluctant to enlist, in the post-Vietnam era a "dire immediate threat to national survival" will be required to arouse a popular commitment. John Probert looks at our reserve forces and concludes that had President Johnson used them in their traditional role as the nation's second line of defense, the issue of public support for the Vietnam war would have brought it into the open much earlier.

Davis Bobrow's chapter, "Bread, Guns, and Uncle Sam," while very interesting, con-

tains some of the book's more dubious conclusions. Bobrow is convinced that too much of our national treasure is being devoted to defense spending. He claims that we should reorient our foreign policy and national priorities in an effort to improve the quality of life throughout the world. Money taken from the defense budget could thus be used for the benefit of mankind. Incidentally Bobrow was a firm supporter of the extremely meager defense budget proposed by Senator McGovern during his bid for the Presidency. He believes that a "decline in US military striking power from current levels will not increase the probability of war," and that "a credible minimum deterrent can be planned with relative certainty." The author apparently discounts the continued growth in Soviet nuclear strength and the Kremlin's firm commitment to the Leninist concept of world revolution.

The least useful contribution is that provided by coeditor Philip Kronenberg in the conclusions. Kronenberg, embellishing his article with heavy doses of social science jargon, favors decentralized decision-making in a "multiplex" approach to national policy formation. He feels this will inhibit the concentrations of power that tend to undermine the nation's democratic principles. He calls for a massive—and politically impractical—reorganization of the government to accomplish this goal, which would require the uniformed services to divest themselves of such functions as research and development and procurement; civilian government agencies would then take these over. Apparently the author does not recall his military history, for a similar, unsatisfactory arrangement beset the United States Army prior to the Root Reforms of the early twentieth century. Then, various War Department bureaus controlled such functions in a way generally unresponsive to the needs of the soldier. As a result, the man in the field often had to do his duty without the necessary tools.

The book as a whole makes some useful comments and may warrant reading. Yet its diffused nature and emphasis on policy-making rather than on the substance of civilian-

military interplay detract from its value for all but those who are deeply interested in the national policy formation process.

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**U.S. Policy and Strategic Interests in the Western Pacific** by Dr. Yuan-li Wu. New York: Crane, Russak; St. Lucia, Queensland: University of Queensland Press, 1975, 214 pages, \$14.50 hardback, \$7.50 paper.

If the United States had any policy regarding or strategic interest in the western Pacific during the Nixon years, a reader cannot determine them from this book. Yet the stated purpose of the work is to explain and analyze this policy. Written in a language best described as "old academese," it takes slightly more than 200 pages to say what could have been stated in 20 pages of concise English. The book calls to mind S. I. Hayakawa's observation that "the purpose of language is as much to conceal thought as to reveal it."

Let us, nevertheless, try to find the elusive thesis of the tome. The concept emerges that the Nixon Doctrine is a workable response to changing forces in the western Pacific. This policy, according to the author, is valid despite the fact that the Nixon Doctrine resulted from domestic pressures for change and not from long-term planning. Rather than develop this thesis, however, the author embarks on a kaleidoscopic trip through the "shopping lists" approach to teaching international relations.

The book inundates the reader with *seven* issues relevant in 1973-74, the *four* conditions for force reduction, *four* necessities to deter nuclear war, *six* characteristics of Soviet response, *seven* scenario characteristics, and on and on. The rigidity of such an approach does little to explain U.S. policy in the Pacific during the Nixon years.

A two-chapter section titled "Perception and Response" provides the only material of possible value. Here the author lists various



permutations of alliances possible in Asia and considered changes in military strengths, economic pressures, and ideological differences. Also, a reader might determine that the state of foreign relations in the western Pacific and east Asia is anything but static and that many changes will occur.

Unfortunately, in the rush to publish, the author relies on the assumption of continued American presence in Southeast Asia. If the disjointed organization, the conjectures, the unending shopping lists, and lack of substance do not dampen an appetite for this book, one recent event will. The collapse of Saigon in April 1975 negates a sizable portion of the book's foundation.

The author closes with a call for America to create "a sense of community among all the free nations of Pacific-Asia and of the world." Analysis would suggest that an American-led "sense of community" in Asia was the last thing Americans or Asians wanted in 1975 and beyond! Thus, the book closes its discussion of the Nixon Doctrine and U.S. policy in the Pacific with a backstep in time of 75 years to a period when "carrying the white man's burden" in Asia was more in vogue.

Captain Thomas F. Menza  
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**The United States Marines, 1775–1975** by Brigadier General Edwin H. Simmons, USMC (Ret). New York: Viking, 1976, 342 pages, \$8.95.

From the shores of Tripoli to the halls of Montezuma? All these years we have had the chronological order reversed. This handy work points out many interesting (though sometimes obvious) bits of lore to those not already familiar with the Marine Corps.

The author, Brigadier General Edwin Simmons, USMC (Retired), is the Director of Marine Corps History and Museums. Educated as a journalist, Simmons does honor to his training in his prose.

*The United States Marines, 1775–1975* is not a definitive history of the Corps—it lacks the scholarly impedimenta that would give it

that distinction. Rather, it was written for the popular market as part of a British series of regimental histories. The book summarizes the history of the USMC in fewer than 400 pages, brevity alone precluding its being a definitive study. Yet, this is not to say that it is not a scholarly work—quite the contrary! The usual popular history is often subject to inaccuracy; here, the research is carefully done. Furthermore, the chest-thumping one might expect is absent. The work is honest: the defeats (rare enough in any event) are there along with the triumphs.

Simmons's work is not a study of ideas—it is largely a chronological campaign summary that deals only briefly and in a peripheral way with doctrinal matters. The amphibious doctrine that is the justification of the Corps is treated in an introductory way—it had its origins in the Spanish-American War and received great impetus as a result of the Gallipoli fiasco in 1915. Fortunately, the doctrine (and the necessary equipment) was well developed before Pearl Harbor, and its upholders have been on the defensive about it since Hiroshima. Because of the assertion that the USMC is but a second army, the Corps has long assumed that posture. This defensiveness is frequently apparent in the present work, but more often it is the Army, not the Air Force, that is the adversary. While Simmons does incline toward the Air Force position on theater air control, he makes no concessions at all on amphibious doctrine—it is a viable concept and should be cultivated.

The old doctrinal bone between the USAF and USMC had its origins in World War II and concerns the control of air power within a theater. The Marine Corps, of course, has ever been on the side of responsiveness to the will of the individual ground commander while the USAF has desired centralized control to exploit fully air power's speed and flexibility. General Simmons's fundamental evenhandedness is apparent here. While lamenting that Marine ground units in Korea were not as well served by tactical air power after their air units were placed under the operational control of the theater air com-

mander, Simmons does grant that perhaps the overall quality of air support improved. He concedes the same point in connection with the control of air power in Vietnam, and this is all the more remarkable a concession because he is not an aviator himself.

Although *The United States Marines, 1775-1975* is neither the ultimate source of Corps doctrine nor its definitive history, the book is

nevertheless a useful one. It is well-written, accurate, and up-to-date, and its bibliography will guide the curious reader to other, more comprehensive sources. A good popular history, it provides an interesting, balanced introduction to a sister service.

Lieutenant Colonel David R. Mets  
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An anonymous verse inscribed on the grave of an English soldier:

God and the soldier all men adore  
In time of war and nevermore.  
In time of peace when all is righted  
God is forgotten and the soldier slighted.

Quoted in ORVILLE D. MENARD'S "Educational Aspects  
of Civil-Military Relations"





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The Air University Review Awards Committee has selected "The Integrity of the Warsaw Pact, Part I" by Wing Commander Peter M. Papworth, Royal Air Force, as the outstanding article in the March-April 1977 issue of *Air University Review*.



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