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TACTICAL AIR ROLE IN THEORY & ACTION . . .
CHIEU HOI . . . WHY STRATEGIC SUPERIORITY?

SEPTEMBER-OCTOBER 1967

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the cover

The air liaison officer (ALO) and his partner in the air, the forward air controller (FAC), constitute a team that perhaps more than any other factor has made the effort of ground and tactical air forces in Vietnam a closely coordinated one. Their roles and the role of tactical air generally are discussed in this issue of the *Review* by officers of Headquarters Tactical Air Command: General G. P. Disosway, Commander, and Captains Lowell W. Jones and Don A. Lindbo, Major John P. O'Gorman, and Colonel John R. Stoner.



TACTICAL AIR COMMAND

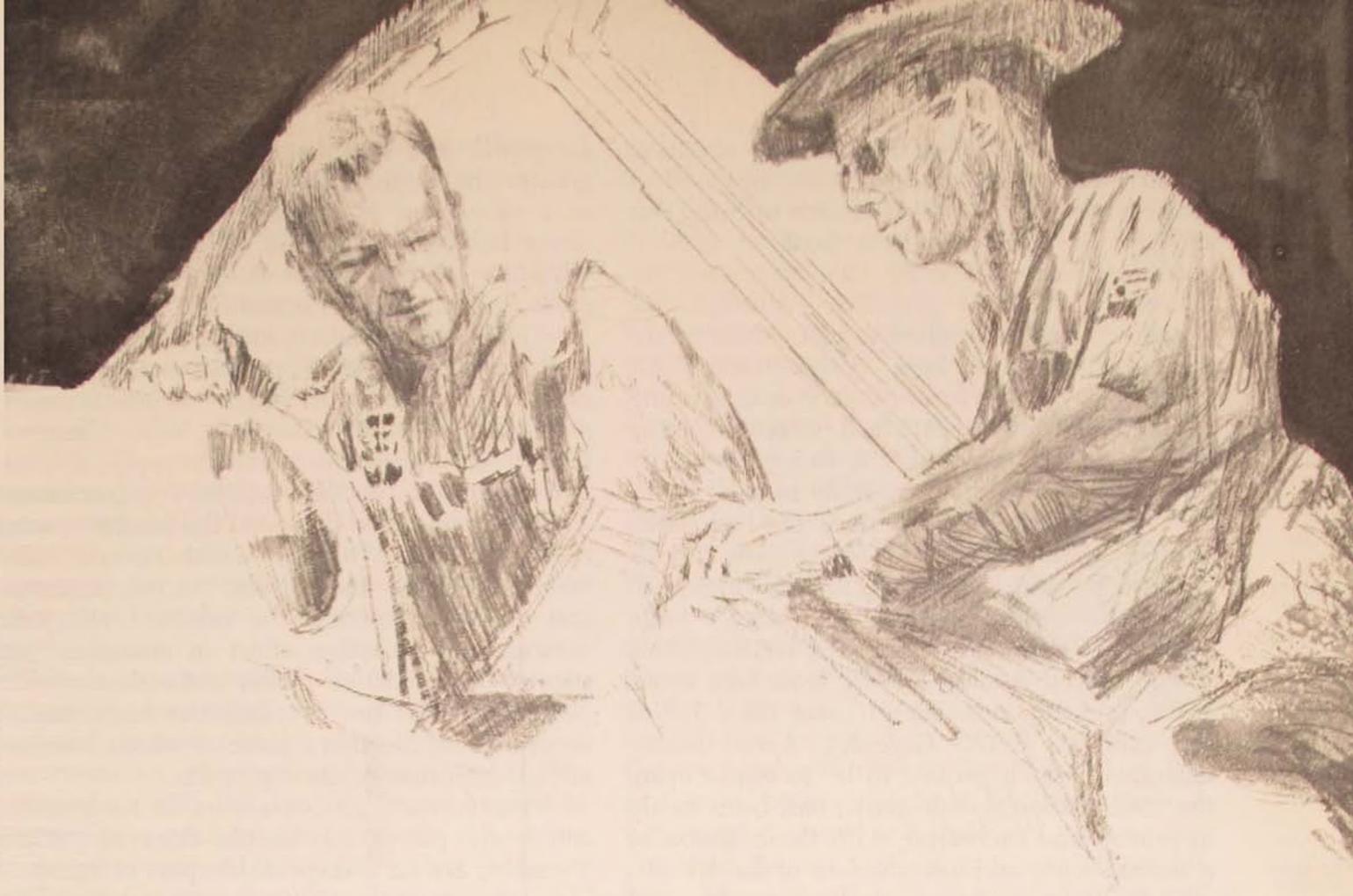
GENERAL G. P. DISOSWAY

WITH national emphasis on strategic deterrence following World War II, there was not enough money, equipment, and other resources to concentrate on tactical air power. Even the Korean conflict, with its heavy emphasis on tactical air operations, did not greatly alter these circumstances.

This did not mean, of course, that tactical air, which had proved a decisive element in World War II and had been revalidated in Korea, would be completely neglected. What it did mean was that men of foresight, imagination, determination, and technical know-

how had to work tirelessly to keep tactical air abreast of other developments. Much progress was made during this period of austerity, with particular attention to the need for greater flexibility, mobility, and versatility.

Tactical Air Command was the focal point of this effort, and it struggled to meet an ever increasing range of obligations worldwide with limited resources. It would be pointless to enumerate all the specific advances that were made during the fifties. Suffice it to say that tactical air power did become a vital part of our national defense structure, with the ability



to deploy strike forces quickly on a global basis and serve as a lower-spectrum deterrence to aggression. This capability was clearly demonstrated during the Lebanon and Formosa Strait crises in 1958. For the first time newly developed Composite Air Strike Forces were deployed to opposite quarters of the globe within a matter of hours after the need arose.

Mobility, speed, and rapid response were not the only areas that demanded attention during the austere years. Quality of performance across the full range of tactical air operations was addressed with equal vigor and imagination. Concepts and doctrine did not change; techniques and equipment did, with vast improvements in fighter, reconnaissance, airlift, and communications (command and control) areas. It can safely be said that by the 1958-60 period, when a new era began to

dawn, tactical air power had reached a high state of readiness despite the necessary limitation of resources over the preceding years.

The change came with remarkable suddenness. In January 1961 the then Soviet Premier, Nikita Khrushchev, declared Communist intention to foment "wars of liberation" in lieu of conventional limited war or general war. Simply stated, this meant that the main thrust of aggression would come from within a target country by clandestine operations and insurrection. It did not mean the end of across-the-border aggressions but rather added a new and dangerous dimension to the continuing threat to world peace.

The shift in cold war strategy brought about a change in national defense emphasis, to provide greater flexibility in response to threats and to ensure a broader selection of options. General-purpose forces, including tac-

tical air power, became the center of attention in early 1961. From that point on, major effort was exerted within the Air Force to bring our tactical air forces up to a peak of combat readiness and to ensure that necessary resources were made available. Although this accelerated effort applied to tactical air forces around the world, here again Tactical Air Command was the focal point. It is interesting to review, from a statistical standpoint, the growth that occurred in the four-year period of expansion beginning roughly in early 1961.

At the start of the period, TAC had seven tactical fighter wings and fewer than 600 jet aircraft. By mid-1964, it had fifteen wings with more than 1400 jet fighters, including a large number of F-4C Phantoms. Our tactical airlift force enjoyed similar growth, from four to six wings and an inventory of more than 315 of the versatile C-130 Hercules. Aerial reconnaissance, which proved to be so vital during the 1962 Cuban missile crisis, had been vastly improved and increased, with the addition of a second wing and introduction of the RF-4C, equipped with advanced sensors, radar, and cameras. TAC's personnel strength also had increased by nearly 70 percent, for a total of about 70,000 officers and airmen.

Far more than physical growth was recorded by TAC in this period. Our people achieved remarkable progress in command and control communications for closer coordination between air and ground forces. Close air support techniques were improved, tactical airlift made impressive gains, and aerial reconnaissance moved rapidly ahead with better equipment, technology, and application. Finally, the Air Force became deeply involved in counterinsurgency or special air warfare, and TAC was ready with effective forces when the United States began providing training assistance to the Republic of Vietnam in 1961.

Events in Southeast Asia subsequent to the first stages in 1961 need no review here. However, it is interesting to view the Southeast Asia conflict as a test of modern tactical air power across its full spectrum, from counterinsurgency operations to interdiction. Dating roughly from the Gulf of Tonkin incident in 1964, neither the U.S. Air Force nor tactical

air power has ever been confronted with a greater challenge. Although we were engaged in a new type of warfare under conditions never before encountered, the flexibility and versatility of our forces have enabled us to meet the challenge successfully.

Through innovation, imagination, and professionalism, the Air Force has written a remarkable chapter in its history in meeting the demands of counterinsurgency, close air support of ground forces, aerial resupply, reconnaissance, and all other tactical requirements. Air power has even deprived the enemy of the shelter of jungle foliage, darkness, and bad weather. While the fighter, reconnaissance, and airlift crews must be credited with an outstanding collective effort in ensuring the success of tactical air power in Southeast Asia (SEA), we must not overlook the magnificent contributions of others, some of whom seldom attract attention or draw plaudits.

The forward air controllers, or FAC's, who constantly patrol the hostile skies of South Vietnam, are an indispensable part of tactical air power. It is their task to spot trouble, call in air strikes, monitor the action, and assess the results. Never before have airborne FAC's been used so extensively, nor has any element of air operations proved more effective and necessary. Equally vital to our success in air warfare in SEA are the support personnel, the mechanics and communicators, and the others who handle the numerous behind-the-scenes tasks which rarely get recognition but without which there would be no air operations.

Never before has the U.S. Air Force put into combat more professionally skilled and dedicated personnel than those who have served and are serving in Southeast Asia. Never before have our people and their weapon systems been more effective in every phase of tactical operations. This is doubly significant in light of the unique circumstances of the Vietnam conflict. It is in a very real sense a four-phase operation confined to a relatively small geographical area with all phases in action simultaneously: counterinsurgency, conventional warfare in the north and the south, and pacification. In all phases tactical air operations play an important role, and

there can be no question about the professional manner in which these many diverse tasks are being accomplished.

Because of the stepped-up air actions in SEA over the past two years, Tactical Air Command has undergone a number of readjustments. The principal change, other than supporting SEA requirements by deploying forces and personnel, has been the accelerated training for combat aircrews and maintenance personnel. The replacement training unit (RTU) program has been implemented throughout the command and is in addition to our normal combat crew training activities. At the same time TAC has continued to maintain its ability to respond to other contingencies with combat-ready forces.

We have no way of divining the future or predicting how much more will be required of tactical air power in the years ahead. There is one certainty, however, and this is simply that tactical air will bear an important burden in the defense establishment's role in supporting national objectives. It is equally clear that Tactical Air Command will face growing responsibilities in combat readiness, training, test and evaluation of equipment, and professional skills.

A great deal of our effort right now is concentrated on the test and evaluation of new ideas and equipment. TAC now maintains five specialized centers for fighter operations, reconnaissance, airlift, tactical air warfare, and special air warfare. Dozens of tests are being conducted constantly, of everything from a new rifle for our people to a major new weapon system like the F-111 tactical fighter. New communications and electronic equipment, with emphasis on transportability, rug-

gedness, and simplicity, is an essential need that is receiving major attention.

Among the new major aircraft weapon systems being tested and evaluated before entry into the TAC inventory are the F-111, A-7, A-37, O-2, and OV-10. Each will be an improvement in a specific area of tactical air operations in speed, range, or strike capabilities. The A-7, though subsonic, is designed for close air support and will carry extensive ordnance without degrading its loiter time in the battle area. The Cessna A-37 is currently being tested for use as a special air warfare strike-recece weapon system. The OV-10, a new development in the forward air controller function, will have a strike, reconnaissance, and counterinsurgency capability. A companion piece for FAC activities is the military version of the Cessna 337, designated the O-2. Both aircraft are designed to extend and enhance the FAC and will replace the O-1, which has performed outstandingly in Southeast Asia. A significant innovation is the F-4E, with a nose-mounted 20-mm Gatling gun and larger engine. This aircraft is now in production and will be a follow-on to the F-4D, which was modified to carry the 20-mm cannon and is now operating in Southeast Asia.

These are but a few of the improved systems that will become operational in the near future. However, nothing is static, and the more distant future calls for new developments to meet the requirements of the 1970s and '80s. Flexibility and survivability are dominant factors. One of our most pressing problems today is to make sure we get the right equipment for tomorrow.

Hq Tactical Air Command



Capt. Albert Berry (parachute in conical case) made the first successful jump, 1912, with Tony Janus as pilot.

TACTICAL AIRLIFT

CAPTAIN LOWELL W. JONES AND
CAPTAIN DON A. LINDBO

IT WAS a little after 0300, in the early hours of 27 December 1966. The speaker standing before a serious-faced gathering of tactical airlift pilots and navigators was Lieutenant Colonel Luu Kim Cuong, Commander, 33d Wing, Vietnamese Air Force. Colonel Cuong was explaining to this joint gathering of American and Vietnamese airmen that the mission to be flown in the next few hours was to be the first airborne assault in a new offensive against the Viet Cong in the Mekong Delta region of South Vietnam. Vietnamese paratroopers, together with a sprinkling of American advisers, would be air-dropped into two separate drop zones and

form a pincer movement against a known battalion of Viet Cong. The Vietnamese Air Force would be flying C-47s; and the Americans, C-130s. Once again, the most widely known use of tactical airlift was being employed to initiate this new offensive against "Charlie."

Tactical airlift, as it is known in the military today, was not developed by accident; it was born and bred. In 1908, Lieutenant Frank P. Lahm climbed aboard with Orville Wright and became the first military passenger in a heavier-than-air craft. In 1912, Captain Albert Berry stepped into the "wild blue yonder" with a parachute as his companion and completed the first successful jump from an air-

plane. From this beginning, the story of airlift has unfolded into a vast arena that offers many challenges.

Although progress was slow, the trend continued, and by World War II airlift started to become a part of air power along with the fighters and the bombers. In 1918, some military planes were used for the transportation of mail, beginning the air transportation system of today. It was not until after World War I, however, that the military's first transport aircraft was built. Known as the Martin GMP or XT-1, it was a 12-place aircraft, patterned after the Martin bomber. Then with World War II such aircraft as the C-46 (the first aircraft designed for paratroop operations), C-47, C-54, and C-60 brought military airlift into its own. Since all these aircraft were versions of commercial designs and the later C-97 was a converted bomber (the B-29), the C-82 built in 1944 became the military's first cargo aircraft specifically designed for that purpose.¹ Following the "Hump," the Normandy invasion, and other airlift episodes, the pace quickened as new areas of conflict required great reaction and mobility of forces.

Since World II, a tremendous airlift capability has been needed to meet transportation requirements. The Berlin Airlift, Korea, Dien Bien Phu, the Congo rescue, the Dominican crisis, and now Vietnam are only a few examples of the mounting importance of airlift and the capabilities required.

Over the past decade, the overall airlift mission has evolved. The new concepts and tactics needed to support the Army in combat brought about an increasing requirement for a more sophisticated type of airlift support, which has become known as tactical airlift. The Tactical Air Command was given the primary responsibility of this mission. In contrast to strategic airlift (intertheater), which is the long-haul capability of the Military Airlift Command, tactical airlift (intratheater) provides direct airlift support to Army forces. This direct support environment requires TAC to maintain a dual capability: one is to support airborne assault, and the other is to provide airborne, airmobile, and conventional Army forces battlefield mobility and forward area

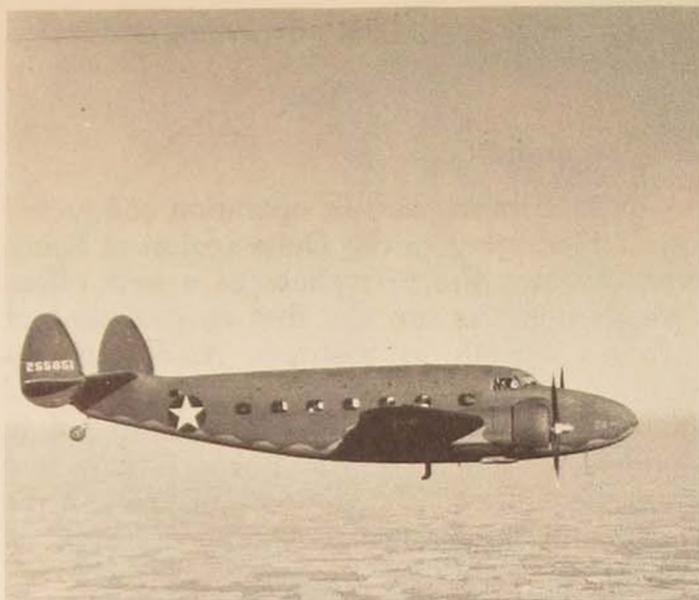
resupply. This is the job now being performed in Southeast Asia.

airborne assault

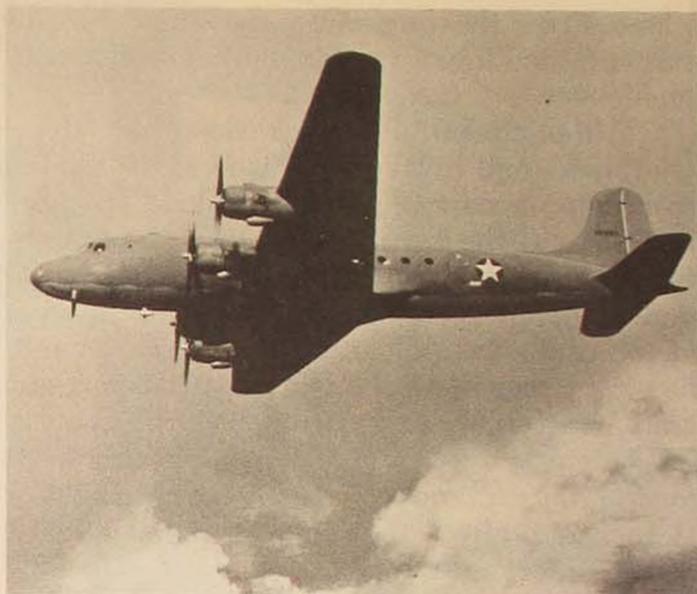
The airborne assault operation conducted on 27 December in the Delta region of South Vietnam was the first phase of a new offensive, but it was not the first employment of airborne assault in Vietnam. Numerous airborne operations involving personnel drops of hundreds of troops have been conducted in South Vietnam. U.S. Air Force C-123s and C-130s have been performing a majority of the drops, but other old-timers such as the C-47 still do their share of the work.

These airborne assault operations are not such "old hat" that they are taken for granted. Exercise Swift Strike III in 1963 employed mass drops of men and equipment using newly developed techniques and procedures. The "pop-up" method of airborne delivery was tested at this time, using the C-130 in a new in-trail formation, flying low and fast to the drop zone, and then "popping up" to drop altitude over the drop zone. This procedure and others were tested again during Exercise Deep Furrow 65, when joint NATO forces were dropped in a war exercise in Turkey. Since then Exercises Rapid Strike and Frontier Assault (February 1967) have been conducted to test other new techniques, the latter specifically to test new equipment under arctic conditions.

It is during the airborne assault operation that the heavy-equipment airdrops are used to the greatest extent. Large numbers of airdropped troops must be supplied with their unit equipment quickly so that operations on the ground can be initiated immediately after the drop. For heavy-equipment drops performed by the tactical airlift fleet, a simple roller conveyer or "skate wheel" device is installed in the C-7A and C-123, and a more sophisticated 463L Materials Handling System is installed in the C-130. In each of these systems the load is strapped to a platform with a collapsible packing of a corrugated cardboard called honeycomb, which absorbs the shock. An extraction chute, deployed at drop time,



C-60



C-52

cuts a breakaway strap and pulls the load from the aircraft. The main parachutes (normally six or fewer) are then deployed and the load is on its way. The use of airborne assault will continue as long as the requirement exists to rapidly deploy a force directly into a distant combat zone.

intratheater logistical airlift

Although the airborne assault operation is the most challenging role of tactical airlift, intratheater logistical support of the Army is the more important role. This support is accomplished in two ways by tactical airlift forces: airland and airdrop. Airland is self-explanatory and is performed by all the aircraft of the tactical airlift fleet. Air Force C-7As (formerly the Army CV-2), C-123s, and C-130s operate daily into and out of a variety of places, including some of the shortest and most insecure landing strips in the world. These missions originate in response to routine requests, which are scheduled daily, and rush or emergency requests, which require the swiftest resupply possible to save an outpost or military operation. Not all these requests can be fulfilled by airland operations, for lack of usable landing area. The development of airdrop techniques, along with the newer extrac-

tion modes, has produced reliable systems to supplement airland when it cannot be used. This is particularly true in supporting small units of the Army in forward areas, where landing zones are usually not available.

463L Materials Handling System

To support these airland and airdrop roles, a cargo handling system was needed to replace the mixture of nonstandard items that was being used. The system was to include all phases of cargo handling from the terminal to the user and was to provide a rapid aircraft onload and offload capability. This need resulted in the development of the 463L Materials Handling System. The 463L system includes terminal, ground handling, and aircraft equipment designed to standardize the handling of air freight. This system was designed primarily for air logistic missions but has been adapted to the roles of tactical airlift. The 463L aircraft equipment includes rails that are fastened to the floor along the sides of the cargo compartment. These rails have integral locks which secure the standard 463L aluminum cargo pallets in place. The pallets are easily loaded and offloaded on floor rollers which are a part of the 463L aircraft equipment. All tactical airlift C-130 aircraft have



C-97

had the 463L system installed. This system has proved its worth in ground time saved in loading and offloading aircraft at established airfields having terminal equipment. Considerable time will also be saved for aircraft operating in an intratheater role when more ground handling equipment becomes available at forward landing strips.

The 463L system has been a major factor in the development of new and more efficient aerial delivery systems, which have allowed the theater commander flexibility in selecting the best mode of delivery to meet the tactical situation. The multiple modes of delivery can be broken down into two airdrop methods, paradrop and extraction.

paradrop

The paradrop modes of delivery are those in which the load is lowered to the ground with a parachute, whereas with the extraction method the load is considered to fall to the ground, but it is extracted, stabilized, and slowed by the parachute.

PLADS. The parachute low-altitude delivery system (PLADS) is a paradrop method of delivering A-22 resupply containers into small, isolated areas where pinpoint accuracy is required. The A-22 container is equivalent to

four 55-gallon oil drums. The system can be used to support Special Forces operations or to resupply company-size units in forward areas. PLADS is capable of delivering one 500- to 2000-pound container on each pass across the drop zone. The load to be dropped is placed on the rear edge of the aircraft ramp and is held in the aircraft by a calibrated nylon breakaway strap. A single ringslot extraction parachute is used to extract and lower the load. The ringslot parachute is constructed of concentric rings of material, spaced several inches apart, extending from the skirt to the apex of the canopy. Approximately 10 seconds prior to the drop, the extraction chute, with its skirt tied (reefed) to a smaller diameter, is deployed into the slipstream and towed behind the aircraft. At drop time, the parachute jump light (green light) is turned on, completing an electrical circuit to an explosive reefing line cutter, which cuts the reefing line and permits the extraction chute to expand (dereef) to its full diameter. When the parachute canopy fully deploys, it breaks the nylon breakaway strap and extracts the load from the aircraft. The load, following a pendulum trajectory, impacts at or near the vertical after swinging 90 degrees of arc.

The PLADS drop is made at 225 feet above ground level (AGL) and at 120 knots speed. The accuracy of this drop is evidenced by the fact that a 20-yard by 20-yard drop zone (DZ) is considered adequate for PLADS operations. PLADS can also be dropped into trees or jungle if necessary, as the relatively high velocity of this drop will enable it to penetrate through the trees with a good probability of load survivability. The high accuracy of PLADS gives it a distinct advantage over other systems, although the one container per pass, with its weight limitation, is presently a drawback. This useful method of airdrop was developed for and is primarily used in the C-130 aircraft, but it has now been adapted for use in the C-123 and C-7A aircraft also.

CDS. The container delivery system (CDS) is a method of dropping multiple A-22 containers from 463L rail-equipped C-130s. The system is a recent adaptation of earlier A-22 container drop systems to the 463L-configured

aircraft. The C-130 is presently capable of dropping 12 containers weighing up to 2200 pounds each, and the system will soon be approved for dropping 16 containers. This will give the C-130 the capability of dropping up to 35,200 pounds of supplies. The cds is primarily a gravity drop in that once the aft restraint is removed the containers are free to roll out of the aircraft. An extraction parachute cuts the retaining strap holding the load in the aircraft. cds drops are normally performed with no flaps, to give the aircraft a nose-high attitude, which speeds the departure of the load once the aft restraint has been cut.

There are now two cds's for the C-130, the G-13 (24-foot-diameter parachute) or low-level cds and the G-12 (64-foot-diameter parachute) cds. The G-13 cds can be used for containers weighing up to 750 pounds with one G-13 cargo parachute and up to 1500 lb if two G-13s are used. The G-13 cds can be performed from as low as 400 ft AGL and employs a pull-up during delivery, which gives a greater density of containers on the ground. The G-12 cds uses one G-12 cargo parachute and it has the capability of dropping up to 2200 lb. The minimum drop altitude for this type chute is 600 ft AGL.

Positive ejection systems. There are many other methods or adaptations for dropping the A-22 and similar containers. The powered-impulse or motor-operated sled ejections are methods of boosting the load from the aircraft. These methods have the advantage of predictable exit time and thereby eliminate one of the many variables affecting drop accuracy. Some of these methods are being investigated for possible adaptation to the tactical airlift fleet. All tactical airlift aircraft (C-130, C-123, C-7A) airdrop the various resupply containers by different means. The reserve C-119 also has the capability to airdrop heavy equipment as well as the various resupply containers needed to support ground forces.

extraction

The extraction modes of aerial delivery are relatively new innovations that have many applications and advantages over some of the existing systems. The extraction systems use

either a parachute or ground-installed equipment to extract and decelerate loads from aircraft flying at approximately five feet AGL. Any relatively clear and level area that will permit five to ten seconds of flight at five feet AGL can be used for extraction deliveries.

LAPES. The low-altitude parachute extraction system (LAPES) is a self-contained system using a 28-foot ringslot parachute to extract and decelerate the load. The parachute, electrical components, and the dereefing technique are identical to those used in the PLADS drop. Fifteen or twenty seconds prior to the drop, the reefed extraction chute is deployed and towed behind the aircraft. The aircraft continues a descending approach and is stabilized at approximately five feet AGL in a level-flight attitude when crossing the panels marking the extraction zone (EZ). At this time the copilot turns on the green "jump" light and electrically dereefs the extraction chute. The greatly increased drag of the fully deployed extraction chute overcomes the load restraint, pulls the load from the aircraft, stabilizes it, and aids in slowing it to a stop.

The C-130 is presently capable of extracting a tandem load (2 platforms) weighing up to 28,000 pounds, and testing is currently in progress to raise this capability to 48,000 pounds. Besides the heavy tonnage capability, LAPES can deliver loads into narrow areas such as dirt or paved roads, river beds, etc., or into airstrips too short for C-130 airland operations.

LOLEX. The Army developed an extraction system called LOLEX (low-level extraction), which is presently being used in the C-7A aircraft. The basic difference between LAPES and LOLEX is the type of chute used. LOLEX uses an unreefed ringslot extraction chute instead of the reefed chute. The primary advantage of the LOLEX system is its simplicity in that it does not require the electrical wiring and dereefing needed for LAPES. The immediate extraction provided by LAPES gives a predictable exit time and a more accurate delivery into a shorter EZ.

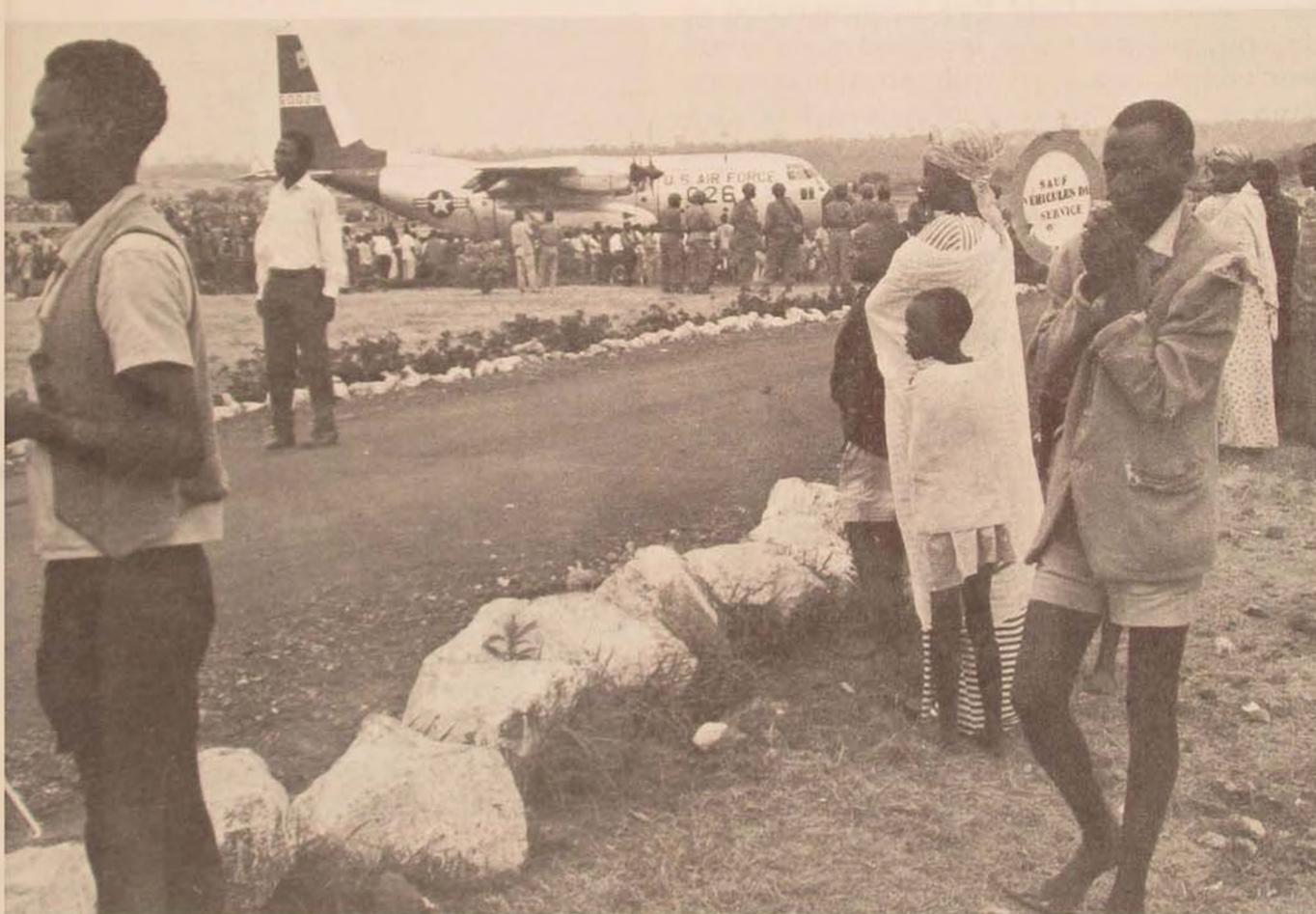
GPES. Another system that has been extensively tested by TAC but is not being used is the ground proximity extraction system

Airlift Through the Years

Offloading vital cargo, Berlin Airlift, 1948-49



*C-47 paratroop over China,
World War II*



USAF C-130 Hercules awaits takeoff during Congo Airlift, 1960.

(GPES), which operates in much the same manner as the arresting gear of a Navy aircraft making a carrier landing. The need for ground-installed equipment, its cost, and the difficulty of engaging the arresting cable are the principal disadvantages of GPES.

Freefall. Another method of airdrop being used in Vietnam is known as the freefall method. Certain relatively indestructible items, such as rolls of concertina wire, have been "thrown" or rolled from the aircraft without any airdrop rigging or parachutes attached. This drop is performed from a relatively low altitude. The aircraft enters a shallow climb at the drop zone to effect the drop by gravity. The C-123 is the primary aircraft used for this type of drop in Vietnam today.

As early as 1963 these new modes of paratroop and extraction were tested and evaluated in joint exercises with the Army. GPES was tested in July and August of 1963 during Swift Strike III. In 1964 Desert Strike, the Indian River series, and Gold Fire I concentrated on the application of LAPES, GPES, and PLADS to current tactics associated with Army operations. Exercise Rapid Strike in May-June 1966 continued the testing of these new techniques. Such exercises have determined the feasibility and value of the systems tested and many have been incorporated in the operations in Southeast Asia.

other TAC airlift roles

Aeromedical evacuation is another important role of tactical airlift, especially in Southeast Asia. Operating in the forward areas where the action is, C-123, C-7A, and C-130 aircraft evacuate wounded to the larger established bases, where they can be treated and transferred to other aircraft for airlift out of country. Emergency evacuations are not limited to combat personnel, however, as tactical airlift aircraft often evacuate military personnel or civilians who need immediate attention.

Airlift aircraft are inherently versatile, since they were originally designed to perform a variety of tasks. Because of this versatility, many other jobs have been discovered for them. In addition to the missions we have



High-density drop techniques were tested during Exercise Rapid Strike, May-June 1966 (top). . . . Exercise Frontier Assault in Alaska, February 1967, tested equipment and delivery in arctic environment.

discussed, the tasks performed by tactical airlift include augmenting the Military Airlift Command (MAC) in intertheater airlift and search and rescue operations, supporting the National Aeronautics and Space Administration during space shots, participating in worldwide combat exercises, serving as airborne command posts, spraying populated areas to suppress disease, defoliating jungle areas that harbor our enemies, and supporting State Department missions such as USO shows and other good-will activities. This growing list of missions signifies the importance of tactical airlift operations in our world today.

airlift in Southeast Asia

The multiple role and versatility of the tactical airlift mission can be seen in day-to-day operations in Southeast Asia today. Secretary of the Air Force Dr. Harold Brown stated in December 1966:

Within the theater, our C-130's, C-123's and combined Air Force/Army CV-2's have hauled a greater tonnage thus far in 1966 than was airlifted by troop carrier units in the entire Korean War. These tactical airlift forces move troops into battle and supply them with food, weapons, equipment, and ammunition in a land of heavy forests, soggy rice fields, and often unpassable roads. Airlift has been a priceless asset. Without it, our air and ground forces could not have operated nearly so successfully.²

In support of Secretary Brown's statement, it is interesting to note that the C-123 and C-130 aircraft flying in South Vietnam last year logged more than 175,000 sorties to deliver 545,000 tons of cargo and more than 1,500,000 passengers.³

The C-130 units in South Vietnam are located at four different bases: Tan Son Nhut AB outside Saigon, and Cam Ranh Bay AB, Nha Trang AB, and Da Nang AB on the eastern coastline near large port facilities. The crews and aircraft rotate from out-of-country bases and stay in-country several weeks at a time. C-7A and C-123 crews are permanently stationed in South Vietnam. The C-123s operate out of Tan Son Nhut, Bien Hoa, Nha Trang, and Da Nang, while the C-7A crews stage at

Vung Tau, Cam Ranh Bay, and Phu Cat.

A typical day for a C-130 crew in South Vietnam begins at or before dawn and ends that evening, twelve hours later. Twelve hours is the normal duty day but may be extended to accomplish an important mission. The crew reports to the aircraft approximately two hours prior to the scheduled takeoff time, to make necessary preparations. With each crew member performing his job in a professional manner, the propellers are soon turning as the big four-engine turboprop begins what is to be a full day's work. . . . Eleven tons of rice, C rations, and helicopter parts, plus ten passengers, fill the cargo compartment as the C-130 lifts off on schedule for its destination in the central highlands of Vietnam near Pleiku AB. The cargo and passengers are delivered into a 3000-foot dirt strip that is the center of a large U.S. Army operation. Soon the C-130 is airborne again, with medical evacuees and high-value items being returned to the rear for repairs. After a short flight, the C-130 touches down at the home base. This time the crew receives a mission to carry a load of fuel bladders to an outpost only 40 miles from Saigon, where a large helicopter operation needs the fuel badly. Nine fuel bladders with a total weight of over 30,000 pounds are loaded by forklift, and at destination, only 15 minutes after takeoff, the bladders are rolled out the rear loading ramp without stopping engines. After only a few minutes on the ground, the C-130 is on its way back for another load. The engines are shut down for re-loading, and the crew takes time to refuel, check over the aircraft, and possibly buy a hamburger or break open some C rations for lunch. Shortly the C-130 is taxiing out again for takeoff. The round trip, including loading time, takes approximately one hour, and the crew completes four more shuttles before the sun goes down and the short runway at the outpost can no longer be seen. The crew has flown twelve sorties (six shuttles) since the day began, carrying 45 bladders of fuel in five shuttles and 24,000 pounds of supplies and passengers on the first shuttle. The aircraft is quickly checked and refueled, and another crew reports, prepared for a 12-hour night shuttle



Litter patients board a C-130 for airlift from Vietnam to Clark Air Base, Philippines.

tour. The night crew normally flies routine resupply missions into the larger airfields.

The activities just described are by no means standard. The missions vary greatly, and so do the loads. One crew may not go into the same airfield more than once a week, and the missions may include airdrops, flare mis-

sions, or any of the other tasks previously discussed. The new modes of aerial delivery, such as PLADS and LAPES, are rapidly becoming integrated into the tactical airlift operations in South Vietnam. As for load variety, the tactical airlift fleet literally carries everything from pigs to plasma. The C-123 is the "hog hauler"

of the fleet, virtually able to supply an outpost with all its livestock needs. Even though the C-130 performs most of the airlift in South Vietnam and is used as the example here, the tactical airlift fleet relies heavily on both the C-123 and C-7A, which carried the bulk of the intratheater airlift workload before 1965 and still performs operations into the shorter strips where the C-130 is limited.

In Southeast Asia today the airlift task is monumental, requiring not only planes and crews but also men and equipment to support them. As an example of the airlift requirements in South Vietnam, a look at the tonnages handled by Tan Son Nhut Air Base should serve as an eye-opener. During August of 1966, the 8th Aerial Port at Tan Son Nhut set a one-day record of 1201 tons.⁴ By comparison, Travis AFB, California, MAC's busiest stateside terminal, on a record day in February 1967 handled 951 tons of cargo. This cannot be accomplished with men and planes alone. Aerial port, maintenance, transportation, POL, combat control teams, and many other base support personnel are all responsible for attaining this record. Outstanding performance is required from the tactical airlift fleet *and* the people who support it, and the record shows that this performance has become a reality in South Vietnam today.

needed improvements

Despite these impressive accomplishments and capabilities, there is a requirement for many near-term improvements to overcome some present limitations. A problem area that is being rapidly improved but still needs further effort is that of decreasing onloading and offloading times. Vietnam experience has shown that this problem is magnified in several ways at some of the more austere airfields, where parking space limits the number of aircraft that can be on the ground at one time to one or two. These fields either have only Army personnel who are completely unfamiliar with the aircraft to assist in on/offloading or have an aerial port detachment of maybe two people with very little or no equipment. As more rough-terrain loaders and fork-

lifts become available at these austere airfields, the aircraft turnaround times will decrease and tonnages will increase.

Tactical Air Command at Langley AFB, Virginia, in conjunction with the Tactical Air Warfare Center (TAWC) at Eglin AFB, Florida, and the newly organized Tactical Airlift Center (TALC) at Pope AFB, North Carolina, is continually studying and testing new methods, techniques, and equipment so that tactical airlift can continue to provide support to anyone, anytime, anywhere.

Considerable emphasis is being placed on the development and procurement of equipment that will improve airland capabilities. Portable, lightweight, readily assembled LZ/DZ markers and lights and a portable instrument landing system (ILS) are some of the items that will improve present airlanding and airdrop capabilities. Very lightweight markers and lights that combat control teams (CCR's) can jump with and assemble readily are being developed and tested. The portable ILS under development will be installable in minutes and will bring an aircraft down to an LZ or EZ with weather minimums of 200 feet and ½ mile.

Fertile areas for improvement are the paradrop and extraction modes of aerial delivery. These delivery modes evolved primarily to make up for the limitations of existing airlift aircraft. They are much more expensive than airlanding, but they do enable an aircraft to deliver troops, equipment, and supplies farther forward in the battle area. It is believed that the advent of large numbers of vertical takeoff and landing (VTOL) aircraft will decrease the importance of these delivery systems. However, the present tactical airlift aircraft, especially the C-130, will be around for many years, so continued interest in improving airdrop and extraction capabilities is vital. Immediately needed improvements include higher reliabilities, improved accuracies, cheaper chutes and equipment, heavier unit load capabilities, and the ability to drop from lower altitudes. Much effort is being expended toward improvement in these areas.

The Army is conducting development efforts toward establishing the capability to deliver cargo/equipment loads of from 2000 to



The 463L Materials Handling System speeds onloading and offloading of palletized cargo, here lined up to board C-130 Hercules.

Cargo Pickup and Delivery

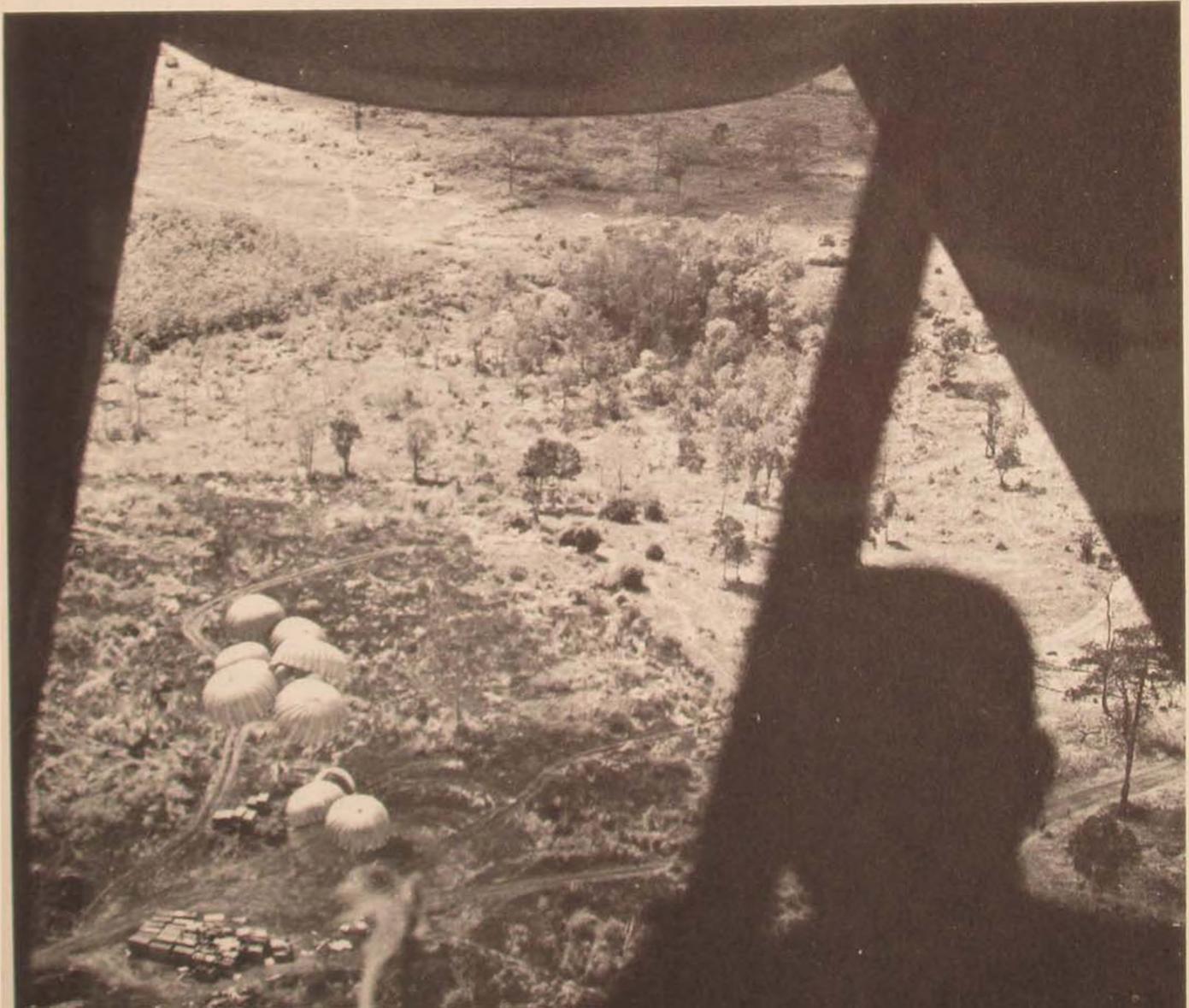
C-130 using low-altitude parachute extraction system (LAPES)





Roller conveyer facilitates drop of palletized cargo.

USAF C-7A Caribou resupplies combat area in Vietnam.



35,000 pounds at altitudes of 500 feet or less. The Air Force is sponsoring a development program for the airdrop of payloads of 25,000 to 70,000 pounds at minimum altitudes up to 30,000 feet and at airspeeds up to 200 knots. Tests are also being conducted to determine the lowest safe altitude from which equipment can be dropped using present-day chutes and procedures. Wind is the most unpredictable element and the variable most affecting drop accuracy. Lowering drop altitudes drastically reduces exposure time to the wind and thereby has a great effect on improving accuracy.

Tests are being conducted under a program called low-altitude aerial delivery systems (LAADS). The objective of this program is to use the main parachute(s) both for extracting a platform load of supplies or equipment from the aircraft and for lowering it to the ground. This would serve to lower drop altitudes to 500 feet or less by reducing the vertical distance required for the main parachutes to deploy fully. These chutes, with their large area, provide a tremendous extraction "g" force, creating the problem of rigging the load and platform to withstand it. Another very serious problem is that if the load should snag or hang up on anything on its way out, the results could be catastrophic.

Airdrop methods are expensive, and the bigger and heavier the item, the more expensive the system becomes. Both low-cost disposable parachutes and reusable parachutes are under development, but it is not known when they may become available. A cost analysis of a heavy drop using 6 G-11 parachutes, based on one delivery and without the recovery of equipment, showed an approximate cost of \$9200. The same analysis showed that a LAPES delivery of the same weight would cost approximately \$2800.⁵ Actual costs would be less than these, since some of the parachutes and equipment could be reused. These figures indicate that pursuing some of the new modes of delivery is sound from the standpoint of cost.

Considerable effort has also been expended in the development of steerable parachutes, to be dropped from high altitude. This type of drop could conceivably have many

applications, but the cost of the radio control equipment and parachute steering mechanisms may limit its use to special or emergency deliveries.

There is urgent need for an improved adverse-weather capability for tactical airlift. There is a program to develop the adverse-weather aerial delivery system (AWADS), to provide the C-130 fleet with this capability. When this equipment is installed, flying formation (enroute station keeping), airdrops, and airdropping at remote sites will be possible at night and under adverse weather conditions.

There is a future requirement for aircraft designed more specifically for the tactical airlift role. This is considered necessary to enable tactical airlift to continue supporting the Army in its ground combat role and to increase the capability of providing it battlefield mobility. A true STOL aircraft would be an interim measure until VTOL technology and development are more advanced. A v/STOL transport aircraft with its range, speed, and vertical capability has many applications. A fixed-wing v/STOL aircraft will inherently have much better STOL than VTOL performance; an example is the XC-142, which can take off and land vertically with approximately 8000 pounds of cargo but can carry approximately 16,000 pounds when operating in the STOL mode. Such an aircraft would obviate or certainly minimize much costly and time-consuming runway construction. It would interface with strategic sealift either directly from the ship or from the beach. It would eliminate much transshipment between tactical airlift and Army organic air by providing delivery to the user in the battle area. By being able to land virtually anywhere, it would greatly enhance Army battlefield mobility.

New alloys, plastics, and fiber materials, with greatly improved strength and weight characteristics, are being developed. These developments eventually may make it possible to build a v/STOL aircraft with greater lift-to-weight ratios than the lift/drag of an aircraft wing. If this occurs, the skeptics should be convinced that fixed-wing v/STOL aircraft are entirely feasible and a needed capability for tactical airlift.

THE FUTURE of tactical airlift is both interesting and challenging. New technological advances have opened many avenues through which tactical airlift operations will benefit. Long-term possibilities include the hot cycle, stowed rotor, folding rotor, rotor wing, lift fan, and vectored thrust concepts.

The requirement to provide the Army bat-

tlefield mobility and support in the forward areas remains the primary mission of the tactical airlift force. The present capabilities and future developments that have been discussed are only a part of the continuing effort to expand and improve tactical airlift's ability to accomplish this mission.

Hq Tactical Air Command

Notes

1. Charles H. Lamback, *Highlights of Air Transportation in the United States Air Force* (Pittsburgh, 1954), pp. 15-18.
2. Secretary of the Air Force Harold Brown, Speech to Aviation/Space Writers Association Meeting, Washington, D.C., 8 December 1966, *Supplement to the Air Force Policy Letter for Commanders*, January 1967, p. 6.
3. *Strike*, Vol. V, No. 10 (January 1967), MacDill AFB,

Tampa, Florida, p. 4.

4. Major C. L. Deare, Jr., USAF, "Airlift in Vietnam," *Air Force and Space Digest*, Vol. 49, No. 11 (November 1966), p. 50.

5. PLADS PAK, *Combined Usage System Status Report*, Aerospace Research Corporation, Minneapolis, Minnesota, 31 May 1966.



Captain Albert Berry completes the historic first jump.





BATTLES ARE BLOODY MANEUVERS: A VIEW FROM THE COCKPIT

MAJOR JOHN P. O'GORMAN

TO A tactical fighter pilot, the nuclear bomb is a crude weapon. With it, precision delivery is not needed. Even if you miss your target by a thousand feet, you will have destroyed your objective. Not so with the old "iron" bomb.

Because of the precision required, delivery of a conventional bomb and destruction of enemy aircraft in the air constitute an art—an art that we almost lost between World War II and the present conflict in Vietnam. We relearned it in Korea, but we may still be in danger of losing it because we do not practice the art to its fullest extent.

It may be a terrible thing to say, but from the point of view of the professional tactical fighter force it is fortunate that Vietnam did not happen five years later. By then, where would the experienced pilots of World War II and Korea have been? Many would have been lost in the early 1970s to reserve dates of separation. Some would have been grounded by the annual grounding boards. Many more would have been relieved of their annual flying requirements. Prior to Vietnam, a whole generation of fighter pilots had grown up being trained primarily in nuclear weapons delivery. Their ability to deliver a nuclear weapon anywhere in the world was outstanding. The art of flying fighters in a conventional engagement, however, remained with those who were trained for Korea and World War II.

We have not been completely saved by the Vietnam revival of iron-bomb warfare. Because of the devastating power of a hydrogen weapon, the training requirement to employ masses of weapons has been neglected.

Our enemy in Asia employs masses to fight his wars—if not on the battlefield, then in support of guerrilla forces—because this is his greatest strength. If permitted the opportunity, he will again employ masses of aircraft. We will then need squadron and wing commanders capable of handling masses of fighters, as we had in World War II and Korea: men who can direct and employ 50 or more airborne fighters; flight leaders and wingmen who can handle their flights and themselves in a sky full of aircraft, whether attacking enemy aircraft, an industrial complex, or a bridge. There is need for control-tower operators who are experienced with more than eight aircraft inbound for landing, and there is need for instrument approach systems that can handle large numbers of returning aircraft.

Let us look at the training since Korea, the problems we face in Vietnam, and the tactics that have evolved through a combination of both. Let us also examine what we must do to preserve a fighter force that can fight both nuclear and conventional wars.

Actually, training began in 1952 with the

tailwheel-equipped T-6. Many younger pilots had flown only aircraft with tricycle landing gear, and some difficulty was encountered by them in mastering the more-difficult-to-land tailwheel-configured aircraft. A-1E gunnery training at Hurlburt Field, Florida, was almost the same (except for equipment and location) as the Phase I and II gunnery taught at Luke AFB, Arizona, and Laughlin AFB, Texas, in the early and mid 1950s. The tactics taught at Laughlin from 1953 until it became a pilot training base in 1956 were basically the same as those used by the A-1E over South Vietnam and the F-105 over North Vietnam. A-1E air combat tactics were not as extensive as those taught in the F-84 and T-33, but air-to-ground tactics are essentially the same. Other than the codification and naming of maneuvers and the introduction of electronic countermeasures (ECM), tactics air-to-air and air-to-ground seem

Air Force armament technicians prepare 250-pound bombs prior to loading them onto the wing pylons of an A-1E.





to be the same as those used in Korea. Violent maneuvering against a surface-to-air missile (SAM) is not dissimilar to the in-place break used by the F-84 against the Mig-15 in Korea.

Training the Vietnamese in gunnery at Bien Hoa was very similar (except for the combat environment) to training foreign students at Laughlin AFB. A language barrier existed as it had with the French, Yugoslavs, Turks, Japanese, Chinese, Koreans, and others. Although small in stature and short on flying experience, the Vietnamese were equal in ability and courage to other nationals, including Americans.

The missions flown at Bien Hoa when not training Vietnamese pilots were combat strike missions. Before sufficient forward air controllers (FAC) were introduced to cover all of South Vietnam, missions were flown as they are over North Vietnam. The squadron was ordered to hit targets at certain geographical coordinates. The mission was planned and briefed by the flight leader. The target was specifically identified by description or photographs. The flight then navigated to the target, identified it, and hit it. Sometimes the A-1Es were controlled by Vietnamese FAC's, flying small spotter aircraft called O-1Es and using smoke grenades to mark the target. The language problem made this somewhat difficult, but the essential words—"You see my smoke," answered by "I see your smoke," followed by "You hit my smoke"—were easily understood.

Air power is most effective against a concentrated target. The Viet Cong dispersed in the jungles of South Vietnam are not ideal targets for air strikes. When they are forced to concentrate for defense against our ground troops, air strikes become very effective: their location becomes known, our weapons become more effective, and friendly ground casualties are greatly reduced.

To win their war militarily in the south,

USAF forward air controllers fly the unarmed O-1 Bird Dog in reconnaissance missions over both North and South Vietnam. This FAC, flying over the lower southern panhandle of North Vietnam, watches for military activity below and directs air strikes against likely targets.

the Viet Cong (vc) must mass for battle. One of the approaches is to overrun a Vietnamese fort or army camp. These forts protect villages, plantations, and other more extensive areas. When the vc concentrated their forces to take one of these positions, they again became a very good target for air power.

Because masses of troops made good targets for air strikes, the vc switched to the cover of night attacks. This, in turn, brought our flare ship into prominence.

The flare ship has become essential for night fort defense. C-47s and C-123s loaded with million-candle-power flares are on ground or airborne alert. They proceed immediately to a fort under attack and begin dropping flares. The flares alone are sometimes enough to dissuade the Viet Cong. The light from the flares assists those in the fort to see the attackers, who are usually dressed completely in black. But the primary purpose of the flare ships is to light the area so the strike fighters can operate using the same tactics they use in the daytime.

As the war in the south became more sophisticated, jets were introduced, navigation was aided by TACAN (tactical air navigation system) and radar vectors, and American FAC's controlled almost all air strikes. Although the incident rate of mistaken targets has always been extremely low, relieving the strike pilot of responsibility for identifying the target greatly simplified his mission. The forward air controller became in many ways the most important pilot in the war.

In the summer of 1965 the A-1Es were called upon to escort rescue helicopters, known by the call sign of "Jolly Green," into North Vietnam. The first flight was deployed out of Bien Hoa to support F-105 operations for one particular high-risk strike. It was composed of five pilots, one mechanic, one armorer, and four aircraft. In addition to covering that one mission, the flight continued to operate out of a forward air base for 20 days until relieved by a complete detachment. The A-1E flying the rescue mission is known as "Sandy." The combination of Jolly Greens and Sandys has become a very highly developed combat rescue team.

When a pilot is downed in North Vietnam he is initially capped by the remainder of his flight. A flight of four Sandys and two Jolly Greens, on ground or airborne alert, immediately proceeds in the direction of the downed pilot. Two of the Sandys go ahead, because of their somewhat greater speed, to locate the downed pilot. The other two stay close to the Jolly Greens to protect them from ground fire. If the reaction is quick enough, the Sandys arrive at the scene before the cap flight runs out of fuel. The fighters point out the location of the downed pilot to the Sandys, who orbit in the vicinity until the arrival of the Jolly Greens. Ground fire that threatens the Jolly Greens at the rescue scene or en route is suppressed by the Sandys, either with their own weapons or by acting as FAC's for other fighters that have been diverted for the rescue. A-1Es in search of downed aircrews have penetrated through flak and missiles to within 15 miles of Hanoi.

A-1Es are also employed as FAC's in out-of-country missions, where the missile threat is not great but the ground fire or range is too great for the O-1s. The heavy tropical foliage lends itself extremely well to camouflaging supply routes and equipment. Whole roads have been covered with foliage and are extremely difficult to see from the air. A-1Es are sometimes assigned the task of finding targets in these areas. Intelligence designates the most likely locations for reconnaissance, and the A-1E pilots acting as FAC's are given fighters to use on targets they discover. After acquiring a target, the FAC marks it and, by radio, calls the fighters in for the strike.

Missions in the A-1E can be very long. Airborne cover for ground operations has often lasted between seven and eight hours. The unsuccessful search for Smoky 21 (an AC-47 gun ship) required sunup to sundown operations by a flight of four A-1Es for three consecutive days. The pilots took off before dawn, searched for six to seven hours, landed for fuel, food, and water, and were airborne again within 45 minutes. They then searched until dark. This was tiring enough for TAC pilots who had at least learned from ocean crossings that it was possible to spend eight to twelve

hours in a single-seat aircraft; but it was nearly exhausting for Air Defense pilots accustomed to relatively short intercept missions.

Low-level navigation and nuclear delivery, emphasized since the 1950s at the expense of basic tactics, were unusable. Low-level navigation at 500 to 1500 feet altitude, as practiced for over 10 years in preparation for nuclear penetration missions, did not apply. Real low-level at 50 feet is applicable against SAM's and flak, but there is as much difference between pilotage at 50 feet and at 500 feet as there is between pilotage at 500 feet and at 5000 feet. Without practice and training at 50 feet, that altitude could not be used in combat. The over-the-shoulder nuclear bomb delivery maneuver was never designed to deliver a 750-pound bomb against a 10- by 30-foot bridge. This is not to say that the nuclear mission filled by fighters was not essential or that the training and tactics for that mission were not excellent. Rather this is a plea that we not again lose sight of basic fighter tactics.

We should never forget that flying and employing a fighter is an art. It is not the same discipline that is required to sit in a silo and press a button to fire a nuclear missile. Like any art—music, painting, surgery—delivering weapons with a fighter requires continual and extensive practice. To maneuver an aircraft at speeds between 300 and 600 knots under a great variety of cloud heights and visibility conditions cannot be mastered with a set of books and a dozen or so training missions on an air-to-ground range. This art of flying fighters requires continued and extensive practice.

Part of the training for nuclear penetration missions is in-flight refueling. This training is excellent and applies to our missions in Vietnam.

The missions up north for the F-105 regularly require in-flight refueling. This becomes routine and, other than the fatigue it adds to the mission, is no great problem as long as the weather is good or refueling locations can be changed if the weather is bad. It is during marginal conditions that refueling really gets "interesting." This has always been true on deployments and ocean crossings, and it presents no difficulty in Southeast Asia that

cannot be handled by the flight leaders with imaginative cooperation of the tanker crews.

On a mission deep into North Vietnam, the strike pilots do not have the advantage of a FAC to locate and mark their targets. Their navigation has to be precise and accurate. The flak is too intense for them to orbit the target. They approach from a planned direction so that they can immediately recognize the target. In this particular war, small errors have a far-reaching effect. Bombing in North Vietnam has been compared to delicate surgery. The degree of competence required to interdict a small bridge adjacent to a populated area under marginal weather conditions while receiving heavy ground fire would be no mean achievement for any profession. Strict compliance with orders to strike a particular target and no other and to confine the bombs to the exact target area generates considerable professional pride.

Tracking time for a dive-bomb pass is the time available, after the aircraft is established in a dive, to fly the fighter so as to place the piper (an optical aiming device) in the proper position in relation to the target so that the bombs will hit the target. This time amounts to between six and nine seconds whether you are flying an F-105 or an A-1E. The biggest problem is to estimate the effect the wind is having on your aircraft. The aircraft must be constantly adjusted to compensate for this wind so that the piper arrives at an estimated position relative to the target that will allow for the continued wind effect imparted to the bomb by the aircraft at release. These calculations are made simultaneously with power adjustments, so that an exact airspeed is reached at an exact altitude while maintaining an exact dive angle.

Those six to nine seconds are available only when conditions are optimum. If, because of ground fire, missiles, or weather, optimum conditions do not prevail, the six to nine seconds can be reduced well below six. Bombs have been successfully dropped on very small bridges along the Red River in North Vietnam when haze had reduced air-to-ground visibility to not much more than a mile. This reduces the tracking time to some-

thing between one and two seconds.

Dive bombing is only one of many modes of delivering weapons from a fighter. There is skip bombing, rocketry, strafing with machine guns or cannon, nuclear delivery, air-to-air guns and rockets, and other deliveries using radar. At one time the Tactical Air Command required qualification or familiarization in ten to fifteen different weapon delivery modes.

The tactics used in the Vietnam war seem to be the same as those used in Korea, with an element of evolution considered. The most notable innovation in aerial warfare in Vietnam is the surface-to-air missile, the SAM. Our tactics against the SAM are partly those used against enemy aircraft and partly those used against anti-aircraft artillery.

If electronic countermeasures are developed to their logical ultimate (and this may be possible), then fighters could operate as if no electronic threat existed. Where ECM are

short of this goal, tactics are developed and modified to counter any electronic threat.

Higher speeds and the use of air-to-air missiles may be responsible for some evolution in tactics. But the fighter pilot must still maneuver his aircraft into a position where he can bring his weapons to bear on the enemy, while avoiding placing himself in a position where his opponent can accurately fire at him. Speeds are relative: if the World War I Spad pilot chose to use his then unheard-of speed of about 100 mph to run rather than turn to engage the enemy, no air battle took place. Today, as long as the Migs continue to run, our fighters will continue flying to their target relatively unopposed by the enemy aircraft. We must always be prepared to engage, however, because the enemy does not always choose to run. Our aircraft as well as our training must be the most advanced obtainable.

Looking back, I realize that our training



F-105 Strike Report

The F-105 Thunderchief often probes deep into Communist North Vietnam, using salvos of fragmentation rockets to destroy camouflaged surface-to-air missile site (left) and 750-pound bombs to destroy a bridge on Route 7 northwest of Vinh (below). The 110-foot Thuong Giap highway bridge (right), 18 miles west northwest of Vinh, was also knocked out by the F-105s.



was good. What we learned, we learned well. But the difference between being qualified in, or familiar with, all the different weapon delivery modes and being highly proficient in those modes is time—time for practice and more practice. It is my belief that just a few more hours of practice in delivery of conventional weapons would have made a great difference in the early days of Vietnam.

The art of flying fighters, like any art, can be learned and maintained only through practice. When nuclear weapons are being employed, a high level of this art may not be required; but in a nonnuclear war, because of the requirement to engage the enemy and employ masses of weapons, a high level of this art must be maintained.

Nuclear weapons, because of their extensive destructive power and highly developed systems, do not now require the accuracy and training that are required in the delivery of

conventional weapons. Ten percent or less of the training allocated to weapons delivery should be sufficient to maintain proficiency in the actual delivery of nuclear weapons. Only by increasing the amount of training allocated to weapons delivery and concentrating primarily on the various conventional weapons can we maintain this very fine art.

Accuracy in delivery of conventional weapons air-to-ground must be better developed to reduce exposure to enemy flak and missiles. The greater the accuracy, the fewer restrike missions and the less exposure to enemy ground weapons.

If 90 percent or more of weapons employment training is in conventional or nonnuclear weapons, the greater portion of that time must be in air-to-air maneuvering. This is the most important and most demanding aspect of the art of flying fighters. Its importance is again emphasized with the realization that with con-



ventional weapons we cannot sneak through enemy defenses but must meet and destroy them in the air before our mass of weapons can be delivered.

The expense of maintaining the high state of the art—the level attained in World War II and Korea and now reacquired in Southeast Asia—can certainly be justified by the cost in pilots and munitions to relearn the art for each war. Possibly the shock effect of suddenly employing such an effective force would cause an enemy to capitulate immediately. This is the force required for short-span wars, wars of such brief duration that time is not available to regain the art.

The increase in training, that is, the increase in flying time, must also take into consideration the necessity of employing masses of conventional weapons. Some training must be provided in employing squadron or larger-sized groups of fighters simultaneously against the enemy in the air and on the ground.

Remember: conventional war requires the employment of masses of aircraft. The bomb damage from four fighters on a railroad marshaling yard can be repaired before the next train is due—certainly by the next night if masses of labor are employed. The damage done by one hundred fighters becomes a greater problem. If there are one hundred flak guns defending this target, their problem is many

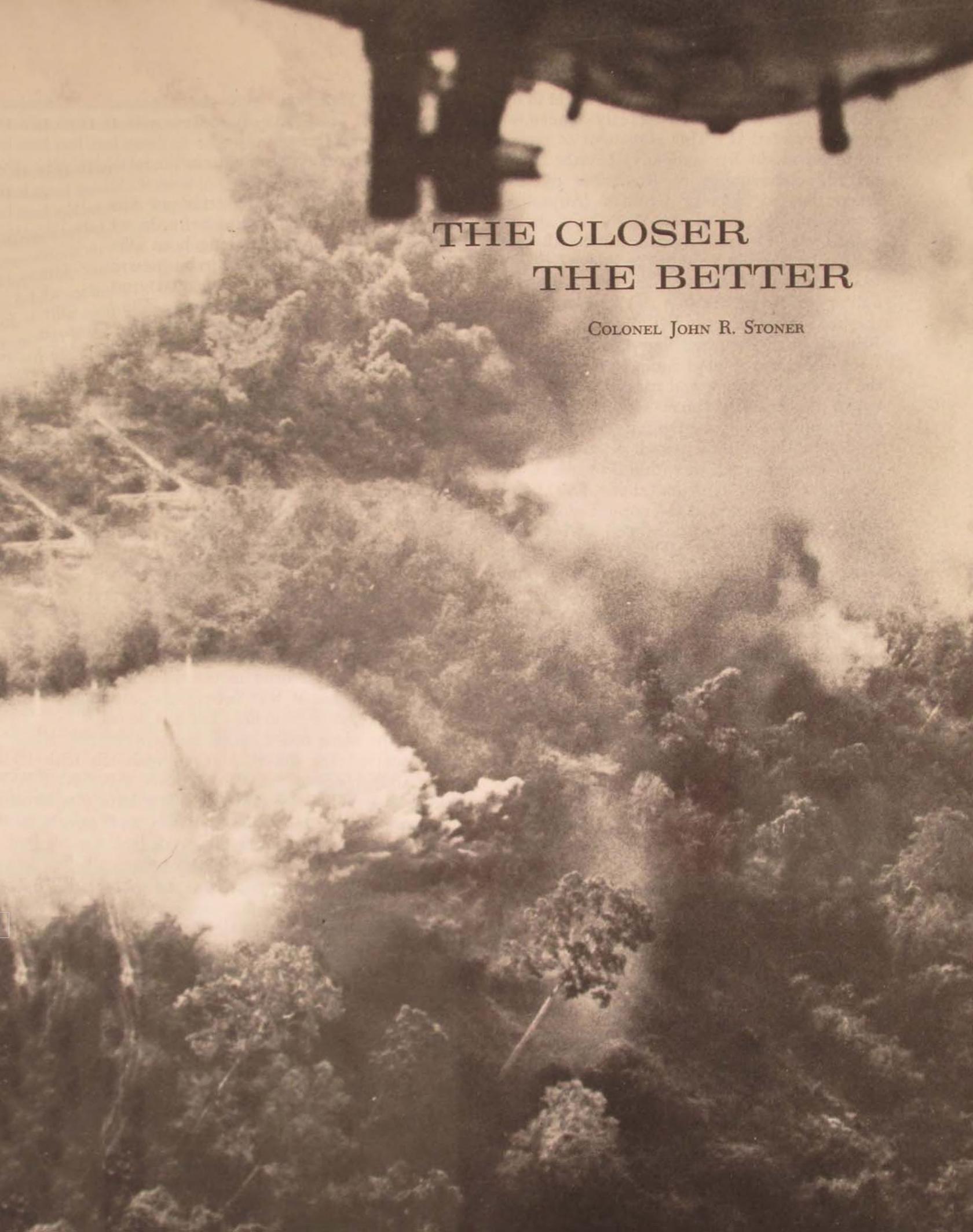
times greater against one hundred aircraft than it is against four.

TO RELEASE a bomb from an aircraft diving at a precise dive angle, at an exact altitude, at a certain airspeed (over 500 knots), with release winds of varying velocity, so that it will travel over 4000 feet without guidance and hit within fifty feet of the target, requires practice. To fire rockets, release napalm, and fire cannons under the same exacting conditions so as to hit within an even smaller area requires even more practice. To successfully maneuver one aircraft against another in aerial combat requires as much or more practice than air-to-ground work. But to lead fifty or more fighters against aerial or ground targets and to keep in mind the location of each of these aircraft requires genius as well as practice.

There is danger in practicing this art even under training conditions. Aircraft run into each other and into the ground. But to reduce or eliminate the practice, rather than attack the particular unsafe action, is to reduce or lose altogether the ability to carry on conventional aerial warfare. We must train the way we are going to fight.

It should be said of United States fighter forces as it was of the Roman legions: "Their maneuvers are bloodless battles; their battles bloody maneuvers."

Hq Tactical Air Command



**THE CLOSER
THE BETTER**

COLONEL JOHN R. STONER

THEY dropped the ordnance right in our laps—but that's exactly where we wanted it." This statement is typical of those made by company, battalion, and brigade commanders in November of 1965 when the 1st Cavalry Division (Airmobile) thrust into the middle of Viet Cong strongholds in the Central Highlands of South Vietnam. . . . During Operation Shiny Bayonet, USAF forward air controllers (FAC) directed fighter air strikes against a Viet Cong force trapped between two battalions of the 1st Brigade in a space less than 200 yards wide. Each ordnance release was coordinated with the forward observer and carefully placed between the friendly forces at the expense of the trapped vc. . . . During the Ia Drang Valley battle, a 1000-pound general-purpose bomb was delivered to within 50 yards of the perimeter of the 1/7 battalion. This bomb was precisely placed at the request of the battalion commander and destroyed a Viet Cong human-wave attack. Our attacking fighters were controlled by both a FAC on the ground and a FAC overhead in an O-1 Bird Dog.

These are examples of the close air support provided to units of the 1st Cavalry Division during search and destroy operations in the Plei Me, Duc Co, Ia Drang Valley, and Bong Son tactical zones.

Conclusively, close air support in Vietnam has been outstanding. This is not an evaluation promoted by Air Force officers but is the central theme of expressions of thanks not only from General Westmoreland and Major General Kinnard, commanding the 1st Cavalry Division, but from the platoon sergeants and infantrymen within the active combat ele-

ments. Their statements have been accurate and dramatic. They have caused many in the close air support area to wonder if there has been a revolutionary development in tactical air operations.

Without a revolution, tactical air forces have been given the opportunity to do what Tactical Air Command has long been affirming: that we in the tactical air business can provide close air support to engaged ground forces with minimum reaction time. The resultant evolution, which spanned a number of years, culminated in modifying the Tactical Air Control System (TACS) into the control agency used today in employing tactical air forces. The need to modify and update the system became apparent during the early 1960s.

Prior to 1963, communications equipment needed by the combat elements of a division for requesting tactical air support was furnished by the Army. When a ground combat element, a company or battalion, required close air support, the request was transmitted to the next level of command, usually to the brigade command post. There it was analyzed to determine if organic artillery fire support means were available and possessed the desired capability. If not, the air request was approved and transmitted to the division for action. Once again it was acted upon, using the rationale that organic fire must first be considered. The same coordination and approval cycle occurred for the third time with the corps tactical operations center (CTOC). All these related actions within the Army structure, from the battalion on the line to the operations personnel within the CTOC, had to be accomplished before Air Force personnel were made aware that a requirement for close air support existed.

Once the request was finally received within the Air Force agency collocated with the corps, action to launch the strike was immediate. Unfortunately, to the layman within the Army, the Air Force appeared to be totally unresponsive in honoring requirements for close air support. All the time used in staffing the request from the battalion, the originator, to brigade, division, and through the corps structure degraded reaction time to an un-

ALO — air liaison officer
CTOC — corps tactical operations center
DASC — direct air support center
FAC — forward air controller
TACC — tactical air control center
TACP — tactical air control party
TACS — Tactical Air Control System
TOC — tactical operations center

acceptable degree. For example, during Joint Exercise Swift Strike II in June 1962, requests for close air support stipulating an on-target deadline of not later than 0800 hours were not made known to the Air Force until 1300 hours. Battles cannot be won when tactical air arrives some five hours late.

As a result of such experiences during most of the joint exercises, the Commander in Chief, U.S. Strike Command, requested that the Commander, Tactical Air Command, and the Commanding General, U.S. Continental Army Command, jointly analyze the organization for fire support coordination and determine the optimum arrangement to support joint forces of varying magnitude. A searching analysis of the system, coupled with the experiences described, revealed the following major weaknesses in the means for requesting and providing air support:

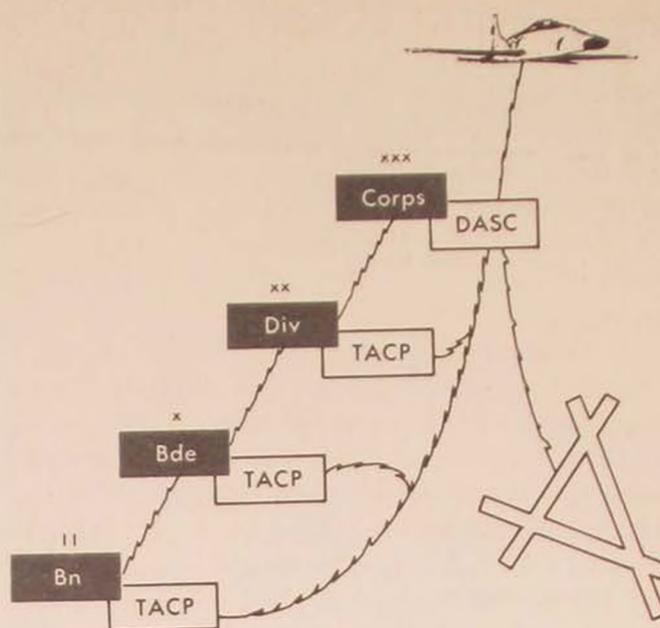
- Inadequate responsiveness of the system to the immediate close air support and tactical air reconnaissance needs of front-line Army commanders. Processing of requests through Army command channels is time consuming, and the delay in informing the Air Force of the air-support requirement is excessive.

- Lack of reliable communications, especially for the air request system and the forward air control system.

- Lack of trained personnel, continuously available, who are intimately familiar with the coordination and planning techniques for providing air support.

As a result of the requested analysis, Tactical Air Command promoted the concept that the Air Force should provide and man all the communications necessary to operate an Air Force immediate air request net which would enable tactical air control parties (TACP's) at each level of Army command to transmit requests for immediate tactical air support to the direct air support center (DASC). Tactical air control parties consisting of air liaison officers and forward air controllers were furnished jeep-mounted and portable-manpack radios to accomplish this task.

A DASC is collocated with each deployed

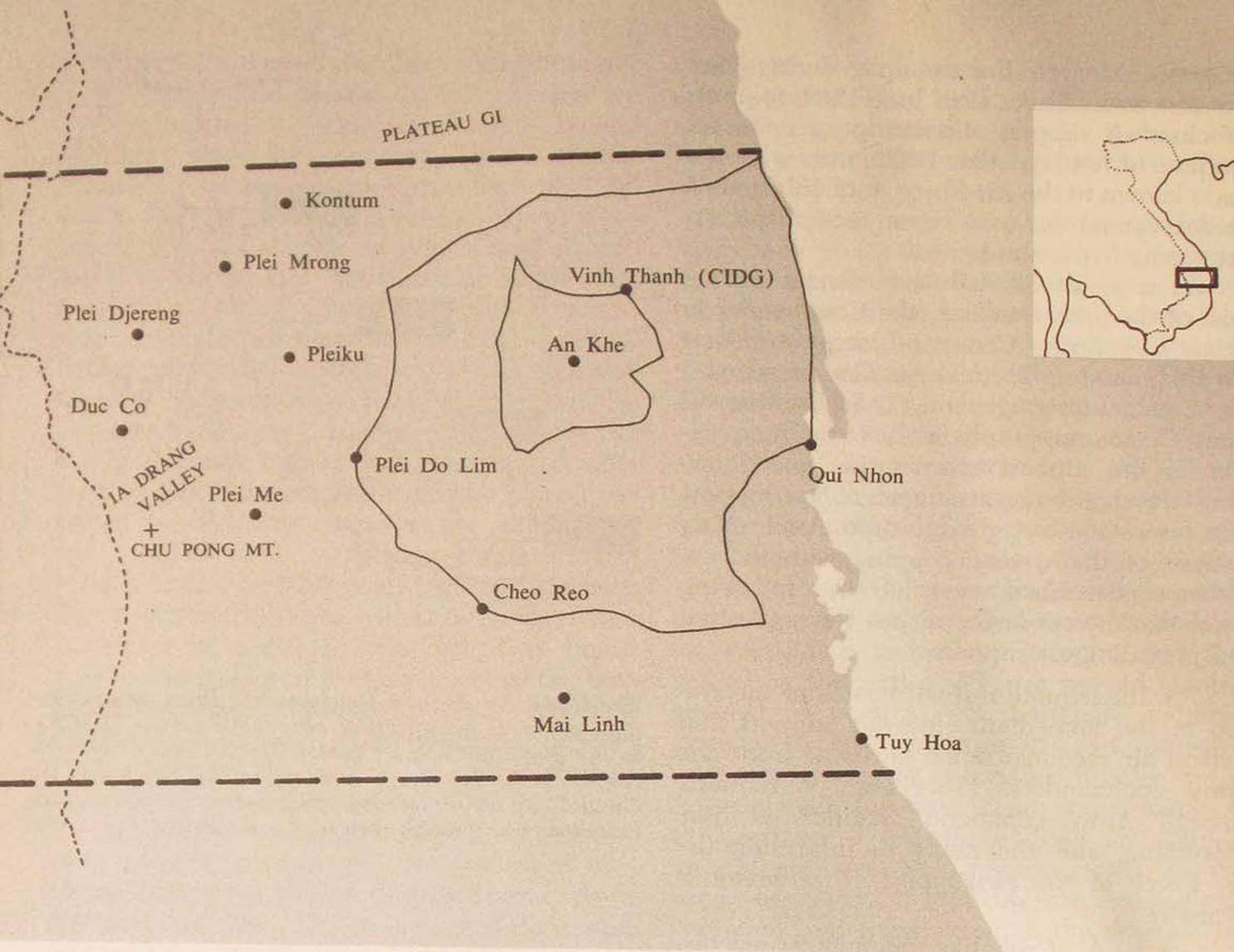


The USAF Air Request Net furnishes direct communications channels from tactical air control parties (TACP's) to the direct air support center (DASC) and a scramble circuit to strike bases and aircraft. The Army Air Ground System processes preplanned missions from battalion up through brigade and division to corps.

corps or with a division conducting independent operations. The principal function of this facility is to provide a fast-reaction capability to satisfy requests for close air support, tactical air reconnaissance, and tactical airlift support. The tactical air control center (TACC) allocates sorties to the DASC to satisfy requests and passes scramble and control authority to the DASC.

The DASC is a highly mobile, air-transportable element of the Tactical Air Control System, designed to operate with the appropriate Army tactical operations center (TOC). It is subordinate to the tactical air control center, which is the air operations element wherein the Air Force component command plans, controls, and coordinates the employment of tactical air forces within an area of operations.

With Air Force-owned equipment employed, the significant change is in the procedure for requesting immediate tactical air



support. The request can originate at any Army echelon. Below battalion level, the request goes to the battalion command post (CP) by the fastest means available. There it is evaluated by the battalion commander or his fire support coordinator, then passed to the forward air controller. He transmits it directly to the DASC over the USAF Air Request Net. Each TACP at intermediate echelons monitors the transmissions and coordinates all requests for close air support with his Army counterpart, the fire support coordinator. It should be noted that no Air Force representative in this network can disapprove a request; only the Army member can do so. If he does, the DASC is so notified by the TACP, and the request is canceled.

Meanwhile, the DASC checks with the Army TOC, plans the mission, and then orders the mission flown if a disapproval has not been received. Should the ground commander determine that the strike is not required after the aircraft has been scrambled, it can be diverted to lower-priority interdiction targets. The Air Force would rather waste a mission than wait for a prolonged period to obtain a positive approval.

With this system, Air Force response has been dramatic, placing fighters on the target in less than 30 minutes from the time the originator at the lowest combat echelon of the Army determined and made known a need for tactical air support.

This has been the evolution of the ele-

ments of the Tactical Air Control System primarily concerned with air-ground coordination functions. The result is apparent: the USAF Air Request Net is used today in Vietnam.

To insure that trained personnel were continuously available to Army commanders, a group of highly experienced and extremely competent tactical fighter pilots was assigned from Tactical Air Command to each Army corps and division stationed in the United States. The team, known as a tactical air control party, consisted of an air liaison officer (ALO), two forward air controllers, and radio maintenance technicians and operators, with the necessary radios to perform their functions. Most of the Air Force officers, in addition to being highly experienced in tactical air operations, were qualified parachutists knowledgeable in airborne operations and the organization and tactics employed by land forces.

Our people assigned as hard core became members of the corps or division staff, available continuously to teach Air Force capabilities and to integrate tactical air support into Army field training tests and major exercises. The three officers provided the nucleus and continuity necessary for daily operations and to insure that augmentation of additional forward air controllers was accomplished without difficulty during major exercises. Many of the hard-core teams prepared instruction pamphlets to guide augmentation personnel. The preface usually outlined the purpose of the pamphlet, which was intended not to replace Tactical Air Command manuals concerning ALO/FAC operations but to augment them with local unit procedures. In that context, they were extremely valuable as a supplement and practical guide. The information contained was based on the experiences of the hard-core members and tended to minimize the lost motion usually experienced by personnel when reporting to an Army unit to participate in a joint training exercise, particularly under field conditions. This action and the dedicated performance of the hard-core forward air control-

lers closed the second gap. Trained personnel had been integrated into the Army staffs at every level of command.

THESE past actions and background provided the basis for the evolution of close air support to the tremendous job being performed today in Vietnam. Tactical Air Command was prepared to accomplish the mission when the 1st Cavalry Division (Airmobile), the first American division employed in Vietnam, was alerted for combat action. When the Division was ordered to deploy in late spring 1965, Tactical Air Command augmented the Division's permanent tactical air control party with all the additional air liaison officers, forward air controllers, maintenance technicians, and radio equipment necessary for combat operations.

The 1st Cavalry Division's tactical air control party organization assembled at Fort Benning, Georgia, contained 19 officers, 24 airmen, and 17 MRC-108 jeep-mounted radio packages. At Division, in addition to the air liaison officer, the team included a fighter operations officer, reconnaissance officer, and an airlift operations officer. All but two of the officers were parachutists and had participated in numerous exercises with Army airborne units. With professionals in each functional area of tactical air support, adequate and meaningful planning could be provided to obtain support throughout the spectrum of tactical air.

The team of four qualified officers assigned at division level provided additional benefits once in combat operations. The 1st Cavalry Division operated throughout the entire II Corps area of South Vietnam from the China Sea to the Cambodian border. Simultaneous actions were planned and executed at the extremities of the area. With forces so dispersed, it was necessary to operate a forward division tactical operations center. With four officers assigned, the Air Force was able to place a tactical air control party with the main divi-

sion roc, allowing the air liaison officer and the fighter operations officer to be employed with the forward mobile division tactical operations center. During the first seven months of combat action, this split operation was required except for a cumulative total of 41 days. Additionally, the division ALO was able to spend much of his time visiting front-line units to insure that the commanders were getting the kind of air support they desired.

An air liaison officer and an assistant ALO were attached to each of the three brigade staffs. Forward air controllers were positioned with the eight infantry battalions, and a ninth with the Air Cavalry squadron. All nineteen officers, which included the four attached to Division staff, were qualified forward air controllers.

Once assembled at Fort Benning, the tactical air control parties prepared to deploy. They did not accompany the 1st Cavalry Division as an Air Force contingent per se. Each TACP was attached to a unit and reported to its respective Army commander for duty. Air liaison officers, forward air controllers, and their airmen, with all necessary equipment, were attached to their respective staffs and battalions prior to departure. They reported to their Army commanders at Fort Benning for duty and instructions and accompanied their respective units by ship to Vietnam. Once in place, they lived and worked with their attached unit. As a result, the Air Force people were integrated into the various Army staffs prior to entering combat action. With their equipment ready, they were prepared to perform the functions of a tactical air control party extremely well.

The functions of tactical air control parties are

- to provide and operate an air request net
- to control close air support air strikes
- to advise the ground commander on Air Force capabilities
- to assist in planning air-ground operations.

The first two functions are self-evident and are considered the classic tasks of the forward air controller. The other two, to advise his ground commander on Air Force capabilities and to assist in planning air-ground opera-

tions, are the real key factors to providing the timely, accurate, and discriminating close air support necessary to further the land battle. They were certainly the major factors leading to the outstanding tactical air support rendered to the 1st Cavalry Division in the highlands of South Vietnam.

The air liaison officers and forward air controllers at battalion, brigade, and division not only assisted but actually accomplished much of the detailed planning necessary to integrate close air support operations into the fire and maneuver of ground combat elements. The rapport established by living and working together brought our Air Force people into the planning cycle as coequal partners.

Whenever a battalion was committed to combat on the ground, the attached forward air controller accompanied the commander, tramping through sniper- and malaria-infested jungle with full field gear and portable radios, continuously available to advise and to request air support when necessary.

It is in this role that a forward air controller devotes 98 percent of his time and effort. Here he is the Air Force tactician and is welcomed as a valuable and trusted member of the ground commander's staff. The forward air controller, in the air liaison officer role, frequently requested additional tactical air support for certain phases of operations, anticipating requirements before the ground commander saw the need. In some specific instances this action made the difference between success and failure on the battlefield for battalion-size units. For these reasons, within the 1st Cavalry Division's original Air Force contingent, no unit of battalion or brigade size left the Division base camp at An Khe, Republic of Vietnam, for combat operations without its Air Force tactician. He was undoubtedly in mind when a senior Army officer said: "Without exception, all of the Army officers of this Division are convinced that they have had the finest air support that men and machines can provide."

It has been stated that in Vietnam the nature of the conflict and the terrain make it extremely difficult if not impossible to control air strikes effectively from a ground observa-

tion post. This certainly applies to much of the area. It was soon apparent that it would be necessary to extend the sight of the ground forward air controller by providing him an airborne platform. This was accomplished by assigning four O-1 aircraft to the division TACP. With these few aircraft it was possible to position an airborne forward air controller on station above 1st Cavalry Division units. It is over remote, otherwise virtually inaccessible areas that forward air controllers flying the small O-1 Bird Dog aircraft have played an invaluable part in the unrelenting war against enemy training and supply bases.

The airborne forward air controllers were not additional officers brought in on a mission basis but were those attached to units within the Division who were in reserve. With the concurrence of the particular unit commanders, their assigned forward air controllers and brigade liaison officers were deployed with the division forward tactical operations center. From this forward location, they would operate the O-1 aircraft. As a result, two forward air controllers supported all combat actions, one on the ground as the liaison officer, the tactician; and one in the air, the technician.

The airborne FAC would mark targets and accomplish the final control of the fighter strike. This tactic worked extremely well. Both forward air controllers remained in radio contact at all times. The one on the ground, working with his Army fire support coordinator, would make final adjustments of his mark prior to releasing the fighters to strike. This was vitally important because close air support required by U.S. Army units had to be extremely accurate. It was necessary to place ordnance on targets within 50 yards of our troops during much of the combat action. This could not have been possible in the jungle environment, with no visual front lines or perimeters separating friendly and enemy troops, without the closest possible coordination between the FAC's. There was no room for error.

THIS was the Air Force organization and concept of operations for combat within the 1st Cavalry Division. Now, let's



A forward air controller (FAC) with the 1st Cavalry Division checks the maintenance records on his O-1 Bird Dog. . . . Members of a TACP arrange for fighters to provide close air support of 1st Cavalry ground forces.



take a look at how well it performed under fire.

The Special Forces camp at Plei Me was attacked by a sizable North Vietnamese regular force during October 1965. The siege of the camp was crushed by tactical air forces. Some 500 fighter strikes were employed, directed by airborne forward air controllers assigned to the tactical air support squadron stationed in the South Vietnamese II Corps area. This air action kept the camp from being overrun. As a result of the attack on Plei Me, the 1st Cavalry Division was committed to what remains one of the greatest victories fought by American forces, the Pleiku campaign.

To insure that a South Vietnamese armored column could travel with some security to Plei Me to relieve the beleaguered garrison,

the Commanding General, 1st Cavalry, was requested to provide artillery support. One infantry brigade was subsequently committed in the area of the camp. Once U.S. infantry had been heliborne into Plei Me, the enemy withdrew, avoiding an engagement with American forces. The mission then became one to search for the enemy and neutralize the threat posed to the entire western part of the Vietnamese highlands.

At this time, the Division Commander was told that the North Vietnamese could have withdrawn to the north, west, east, or south. With this intelligence, his task of searching out and destroying a sizable enemy force seemed an impossible one. Nevertheless, it was the type of mission for which the airborne division had been designed. With an organic Army aviation group possessing 400

A FAC and an ALO discuss results of their O-1 mission over lunch at a forward brigade command post.



helicopters, the infantry and artillery battalions could be employed over vast areas at will. Once an area of suspected enemy activity had been searched without establishing contact, the troops could be moved many miles by helicopter to search out the next likely area of enemy activity. The mobility inherent within the division enabled it to operate throughout a land mass normally considered a corps area. Additionally, the fighting force could be positioned to occupy land which normally would be inaccessible to units relying on ground vehicular transportation. At one time during the Pleiku campaign, battalions were displaced by as much as 30 miles.

The problem of furnishing immediate and responsive tactical air support was compounded by the increased mobility of the Division. Preplanned air strikes to support the initial action each day were routine. For example, prestrikes of helicopter landing zones could be coordinated with the fire and scheme of maneuver of the infantry force the evening prior to an attack. With the preponderance of tactical air available in South Vietnam, not only were strikes of the landing zone accomplished but four or five likely landing zones in the vicinity could be neutralized as diversionary missions. The enemy knew as well as we the type of terrain required for a helicopter landing zone. By striking more than one, we kept him off balance while the infantry landed. These diversionary missions were not wasted because on several occasions secondary explosions from the diversionary strikes indicated that enemy supply areas and troop concentrations had been destroyed.

This tactic worked extremely well; but as the day progressed, operations became fluid and moved with an increased tempo. When one of the committed battalions displaced tactically to another area and encountered the enemy waiting, ready and willing to fight, close air support was needed with reaction time equivalent to that of the infantryman's rifle. For this reason, to insure that tactical air was available when the need was most critical, our TACP's employed the combat air patrol/air cover concept. Two fighters were kept on station over the ground force in the combat

area from first light until last light every day throughout the 34-day Pleiku-Cambodian-border campaign.

The air-alert fighters, coupled with the airborne and ground forward air controllers, provided a team that could employ aerial firepower in the close air support role with an absolute minimum reaction time. Propeller-driven A-1E aircraft were used for the air alert because they could be loitered for hours and still carry two tons of ordnance. Additionally, the A-1E possessed radio equipment with which the pilot could monitor Army command and fire support frequencies. The pilot could hear the progress of the battle and become a part of it prior to the request to attack. In several instances the pilots pleaded to strike prior to receiving approval from the ground commander. This capability indeed reduced the time necessary to deliver ordnance with extreme accuracy.

It was obvious that the air-alert fighters would not be used for close air support in every case because the ground elements were not in continuous contact with the enemy but were on search and destroy operations. They did, however, represent a tremendous firepower capability, and the Division did not want to have them return to their home bases once their loiter time had been expended if they could be used profitably. For this reason, the Assistant Division Commander for Operations, the Operations Officer, Intelligence Officer, and Air Liaison Officer planned and implemented a division-level interdiction program to support and complement the overall ground action and future scheme of maneuver. For example, after the siege of the Special Forces camp at Plei Me, the next operation was to the west and north searching for the North Vietnamese regulars who had attacked the camp. The enemy, however, could have withdrawn to the east. For this reason the interdiction plan ordered attacks on the hill mass to the east of Plei Me for the next 5-day period. Prior to landing troops in the Ia Drang Valley-Chu Pong Mountain region next to the Cambodian border, the interdiction support using the combat air patrol fighters was shifted to that area. During one day, 17 secondary ex-

A C-130 offloads 500-gallon roadable fuel bladders at Pleiku. During much of the 34-day Ia Drang Valley battle the Air Force delivered more than 70,000 gallons daily.

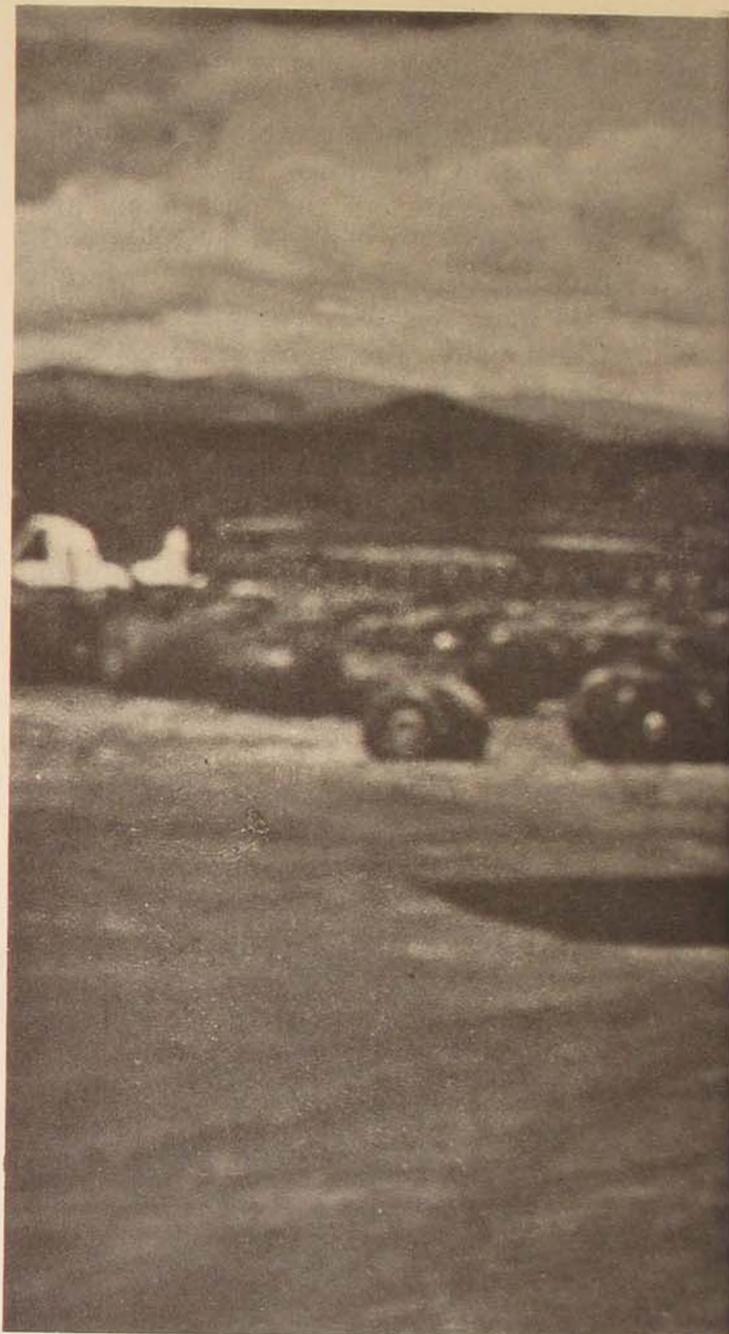
plosions were received, indicating a very lucrative series of targets. These attacks confirmed intelligence reports pinpointing the location of the North Vietnamese regiments that had been sought for some three weeks. The next action was to deploy the battalion commanded by Colonel Hal G. Moore into a landing zone called X-Ray. There he fought the largest single battle of the Vietnam war until that time.

As Colonel Moore's battalion was landed at the base of Chu Pong Mountain, an airborne forward air controller and his flight of air-alert A-1E aircraft were overhead. Once the battalion established its position at landing zone X-Ray, Colonel Moore realized that he was in the midst of an overwhelming number of the enemy. He immediately requested all available fire support, tactical air support, armed helicopters, and ground-based artillery. At this time the airborne forward air controller marked the likely target area, within 50 yards of the ground troops, confirmed his marking round with the ground forward air controller, and committed the fighters. The first bomb was on the target two minutes after the requirement was received from the ground commander.

Follow-on tactical air sorties were requested by the ground forward air controller. During the first 24-hour period, 100 fighters had been used in support of this action. The ground forward air controller directed strikes throughout the night, placing firepower within 30 yards of friendly foxholes.

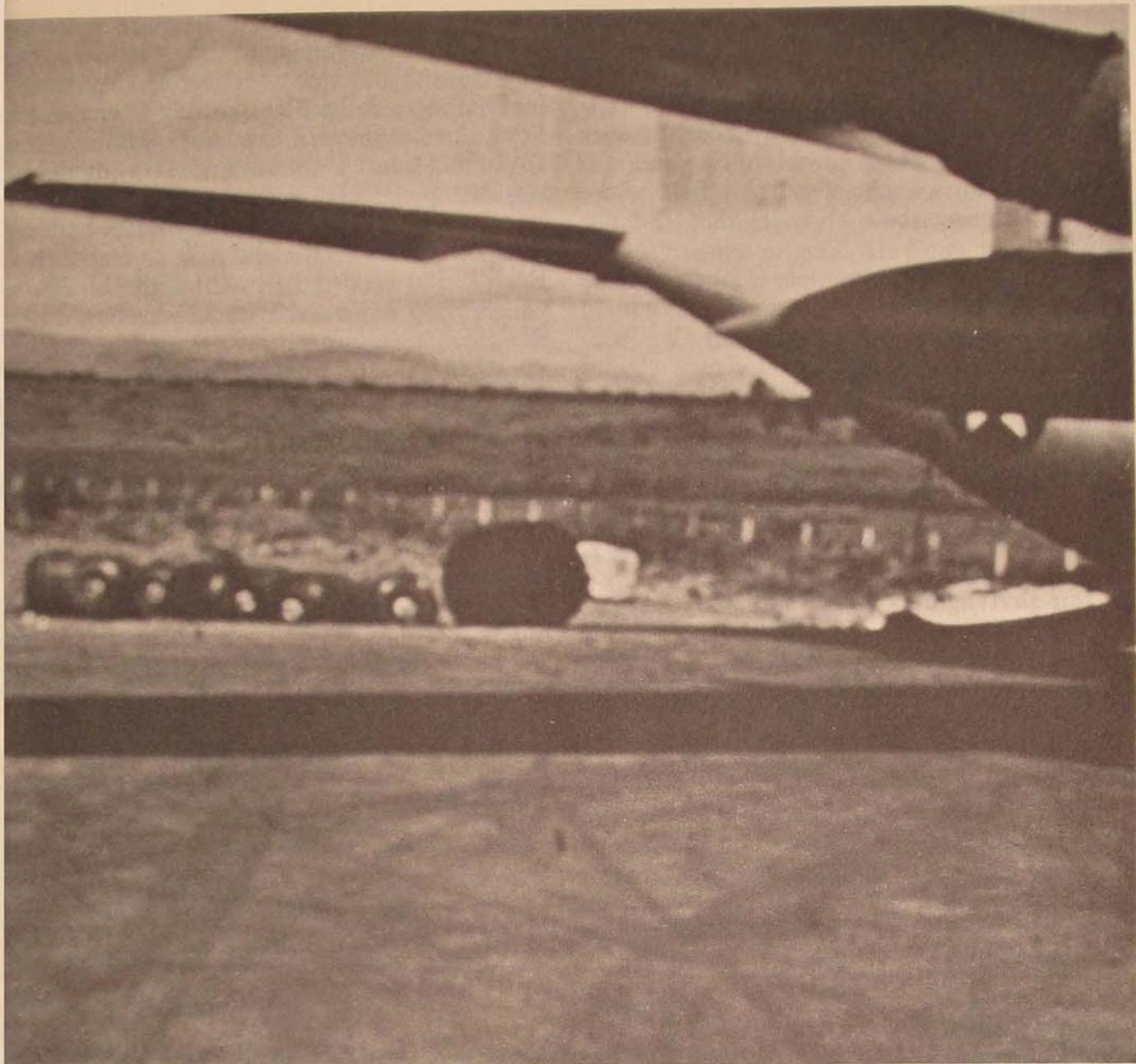
During the five days of this bloody battle, 330 fighter strikes provided close air support. Colonel Moore and his heroic battalion counted 1224 enemy dead and estimated an additional 1300 killed by tactical air power and artillery.

First Lieutenant Charles W. Hastings, the ground forward air controller, employed tactical air in the same target area simultaneously with artillery without compromising safety. This fine officer was decorated for valor by



both the Vietnamese and the U.S. Army during the Ia Drang battle at landing zone X-Ray. During the second day of the battle, I said to Colonel Moore, "How is my forward air controller doing?" He answered, "John, he is doing a magnificent job, but remember he is *my* forward air controller."

In addition to tactical air support rendered, the Ia Drang Valley was the occasion of the first B-52 strikes truly integrated into the scheme of maneuver and responsive to the



needs of a U.S. Army division commander. Once the ground elements became disengaged, it was suspected that the enemy had withdrawn into Chu Pong Mountain. The Commander, 1st Cavalry Division, did not want another attack from a flank position while continuing to search and clear the Ia Drang Valley. B-52s were requested, to neutralize the high ground overlooking combat elements of the Division. For six days B-52 aircraft bombed in very close proximity to the left

flank of the ground combat elements. This was possible because the axis of attack and the time over targets were an integral part of the joint battle plan.

Many have queried the effectiveness of heavy bomber operations. Within the 1st Cavalry Division we could only assume that they were an unqualified success because there were no further attacks from the strategic position afforded by Chu Pong Mountain. One prisoner captured during the final phases of

the Pleiku campaign stated that his people feared the B-52s because they could not determine where the bombs would fall until they hit the ground. Also, trenches did not afford them protection. This particular prisoner had ordered his troops to obtain rice and ammunition from a cache nearby. A B-52 strike occurred during their absence; they did not return.

To summarize close air support of the U.S. 1st Cavalry Division (Airmobile), 12 to 14 aircraft were used daily for the air-alert concept to insure an immediate reaction should close air support be necessary. When additional strikes were required, they were alerted using the USAF Air Request Net. These follow-on flights would be on target within 20 to 30 minutes. For example, during the day that 100 fighters were employed at landing zone X-Ray, two flights of F-100s arrived before the original air-alert fighters had completed their attack. This pattern held throughout the 24-hour period. It is doubtful that our forward air controllers could have employed them any more rapidly or used additional strikes.

A TREATMENT of tactical air support would be incomplete without an analysis of the logistical phase of operations. Air forces' participation in combat usually is equated to bombs on target, and bombs cannot be dropped unless the logistic pipeline flows properly.

During the siege of Plei Me, Highway 19 leading from An Khe to Pleiku had not been secured, so it was necessary to airlift all the fuel, ammunition, and rations into the combat zone. Initially it was determined that Army CV-2 transports and helicopters organic to the 1st Cavalry Division could sustain the necessary air line of communications. Once the Division was committed, however, it became obvious that the logistics support mission assigned to the helicopter force was degrading the Division's capability to operate tactically. On the morning of the third day, helicopter fuel reserves had been reduced to one-tenth of that required to sustain daily operations.

Air Force tactical airlift was pressed into

this vital mission on an emergency priority, primarily to carry fuel into the tactical zone. The requirement was to deliver 140 500-gallon fuel bladders daily. The morning after the Air Force had assumed this responsibility, the Division Materiel Officer and I counted 134 bladders positioned at Pleiku Airport. He was much relieved and pleased because he had not realized that tactical airlift was so responsive. Each C-130 carried 10 to 14 of the bladders, which were offloaded without shutting down the aircraft.

Our C-130 crews were unsung heroes of this phase of the campaign. I congratulated one pilot, a first lieutenant, for delivering 14 bladders in one trip. He replied, "Colonel, if I can hide an extra one from the loading crews, I will have 15 on my next trip." He more than likely accomplished this feat and carried a fuel cargo in excess of 55,000 pounds.

Air Force C-130 aircraft were used throughout the 34-day campaign to position fuel for the helicopters. Deliveries were made to Special Forces camps near the Cambodian border and to the forward command post location of the brigade commander charged with land operations. They were operated into the same landing strips used by Army CV-2 transports and C-123 aircraft. The impact of the C-130 capability was dramatic when compared with the other transports accomplishing the same mission. The CV-2 could lift two bladders, the C-123 four, compared to the C-130's 10 to 14.

THERE HAS BEEN an evolution in procedures and organizational structure to insure the closest possible coordination for providing tactical air support to our land combat forces. We must continually improve TACP communications equipment and provide the necessary mobility to the forward air controller to insure an even quicker response time to immediate requests, primarily in the close air support area. Close air support weapon systems should have the inherent capability to deliver the ordnance accurately, the closer the better.

All these factors are being worked on continuously within Tactical Air Command; however, they are only tools to be used by people.

The key is to plan air-ground operations jointly with the Army, working together as coequal partners at all levels. In this regard, air liaison officers and the forward air controllers are basic to the USAF Air Request Net and the Tactical Air Control System in immediate support of land forces in the battle area. The FAC moves with his assigned ground unit to be in a position to respond to tactical air requirements requested by the ground commander. Here is the necessity for a close personal relationship between USAF supporting personnel and their Army counterparts. The ALO and FAC know the Army problem and develop the mutual understanding necessary to relate the task to Air Force capabilities.

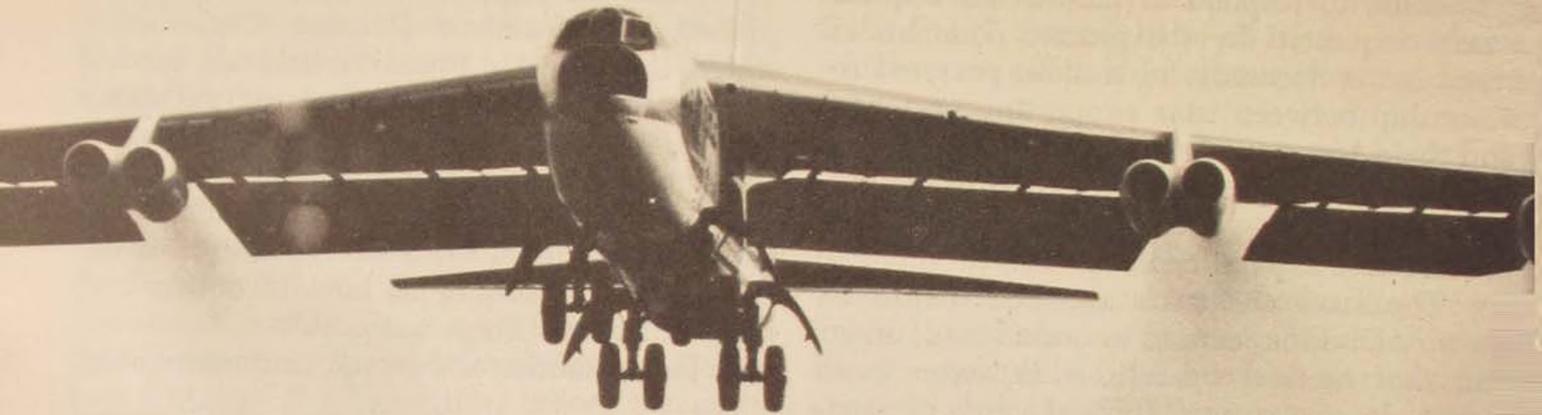
The ALO's and FAC's attached to the 1st Cavalry Division learned to understand, under fire, that tactical operations in some cases meant clearing a few hundred yards of territory. Additionally, they realized that a seem-

ingly insignificant encounter could become total war for them and their infantry counterparts when they were pinned down by sniper fire. Thus, these USAF people came to understand land commanders, platoon leaders, and the infantry rifleman's problem. They knew his fears and learned to anticipate his needs. They knew and understood because they were there.

When the original Air Force team was replaced, the Assistant Division Commander stated that his Air Force tactical air control parties understood and appreciated the Army airmobile concept as few others do. He stated, "Our TACP's are considered to be full members of the 1st Cavalry Division and much credit should go to them for a breakthrough in the Army's understanding of how to obtain and fully utilize Air Force support."

This evolution is dynamic and continuing.

Hq Tactical Air Command



**OUR STRATEGIC SUPERIORITY—
WHY WE MUST
CONTINUE TO HAVE IT**

BRIGADIER GENERAL HENRY C. HUGLIN, USAF (Ret)

WHAT is the basic element in our nation's security, the one element without which our way of life and our very lives would be in jeopardy? It is our superiority in those factors which make up our strategic strength.

What constitutes strategic strength, and what is meant by superiority in strategic strength? What relation does it have to our role in the world? What is its contribution to international stability and strategic balance? Why must we continue to have strategic superiority? What of the future, and what hopes can we have that it will be different?

Our strategic strength can be considered to be made up of those elements of strength which have major influence on our role in world affairs. Here are the most important elements:

- Our national will and the wisdom, skill, and dedication of our leaders
- Our military forces, including their size, experience, modern equipment, readiness for employment, leadership, and morale
- Our economic strength, including our natural resources, industry, and availability of capital
- Our education, training, and skills, including our competence in research and development of new technology and in research of man's basic nature and environment
- Our dynamism in technological fields, in incorporating in our society the advances made by our research and development efforts
- Our political, psychological, and ideological impact: the objectives, standards, moral values, and determination to preserve our way of life that we project; the effectiveness of the image we create in the eyes of our friends and foes; the magnetism we engender; and our aura of success and persistence
- Our alliances with nations who have strength, bases, will, and common purpose and who therefore add more to the alliance than they detract from it.

Strategic superiority can be defined as a condition in which we have a significant overall superiority in the vital elements of our

strength over our principal adversaries, Soviet Russia and Red China. It is an aggregate, qualitative condition.

Central to our strategic strength and superiority are our military strength and our will to use it if necessary. Central to our military strength are our strategic offensive forces and, secondarily, our active and passive strategic defensive forces—our air and missile defenses. It is these major military elements that determine the strategic balance between us and Soviet Russia and Red China in the era of nuclear weapons and long-range bombers and missiles to deliver them. Beyond this basic strategic strength, our military capabilities to deal with challenges and outbreaks of any major kind play a subordinate but vital role in the strategic balance.

Without a superior combination of the elements of national strength, we could not effectively counterbalance Soviet/Red Chinese expansionism, nor their threats and attempts to blackmail and coerce us, our allies, and other members of the non-Communist world.

We basically have a posture of defense; we are neither aggressive nor expansionist. We are generally in the position of being responsive to challenge, and we seldom take the initiative. Therefore, if we were inferior in strategic strength, or even only equal, we and the rest of the Free World would be crucially challenged and faced with futile appeasement, surrender, or nuclear Armageddon. This is why strategic balance in the world today, which contributes to stability in international affairs, is dependent upon our continuing to maintain a significant strategic superiority.

This strategic superiority is essential, too, in giving our leaders confidence to take the actions required to protect the vital interests of the United States and its allies, accepting the low risks involved. Without this confidence, would we have stood firm in Berlin during the past twenty years? Would we have challenged the Soviet sneak move of nuclear missiles into Cuba? Would we have done what we have done for South Vietnam in disregard of Red China's blustering threats and Soviet Russia's dire warnings?

OUR UNIQUE political and economic systems, our vigor and natural resources, combined with the tide of time and world events, have projected us into a role of pre-eminent power and responsibility in the world. We have been thrust into this role at a time in the course of history when the world is in the process of unprecedented change, turmoil, and challenge. Unfortunately, not all our fellow men have evolved far enough to live with us in peace, with freedom and justice under law, without military strength as a basic necessity for our survival. The United Nations has not been sufficiently effective in the major conflicts, confrontations, and tension areas. It is barely able to function in minor disputes not involving the interests of the major powers. And there is little current prospect that the United Nations will be appreciably strengthened soon. Yet the age-old causes of tension and conflict are still rampant: greed for other people's territory, racial and ethnic animosities, excessive nationalism, and suppression or inadequate fulfillment of people's yearnings for a better life.

Currently transcending all these seemingly inherent causes of trouble are the drives of Soviet Russia and Red China to expand by any feasible means their influence, their control, and, where possible, their territory. They possess significant military strength, including nuclear weapons; they have their political and subversive apparatus throughout much of the world; and they are masters of unscrupulous propaganda. We are the primary block to their ambitions, and therefore we are their target. The means by which they strive to expand are direct or indirect according to opportunity. They are persistent and dedicated. They are obsessed with their own doctrines and ideology that they must turn the world their way. And wishful thinking or rationalizing will only obscure—not change—their nature, their objectives, and their basic threat to our security.

Thus, we are unavoidably involved in protracted conflict. This conflict encompasses many fields—political, psychological, economic, and military. To win the conflict, or at least to avoid losing it, we are going to have to continue to devote the necessary resources, skill,

and effort. We have the basic capabilities and knowledge; we just have to have the continuing understanding, persistence, and will. Overall, essential to our success will be the maintenance of a significant strategic superiority over our adversaries.

Basically, our situation is not new. In other ages nonaggressive, nonexpansionist nations have been faced with the same choice of either maintaining, by themselves or with allies, a sufficient superiority over expansionist, aggressive nations of their age or being faced with coercion or conquest. But our situation seems greatly different because of the potential catastrophic consequences of nuclear war. These consequences do put far greater emphasis than ever before on advanced technology, will, and skill in advanced planning and in management of crises.

WHAT CONSTITUTES stability and balance in world affairs? What is the role our strategic strength plays in these conditions?

Ideal international stability may be considered as a condition in international affairs when no nation is in the act of trying, or is apt to try, to gain territory at another's expense, or to exert political control over another, or to upset or direct the internal affairs of another. Such stability would be achieved if all change and accommodation among nations could be accomplished by peaceful and equitable evolution, negotiation, and legal action. But this ideal has never been, and may never be, attained. The United Nations has only been able to contribute to international stability in a minor way. Much of the stability that has been achieved in the last twenty years has been due to our strength, will, and actions.

Stability need not mean preserving the status quo. Change is unavoidable and often worthwhile between nations and within nations. The existence of reasonable stability can create the conditions for change among nations without war and for internal change within nations by the people determining their own future without outside pressure or subversion.

Stability includes deterrence of aggression. One kind of deterrence is achieved when

the aggressor estimates that the outcome of his act would be more costly than his gain would be worth—so he does not act. Yet there can also be another kind of deterrence, the deterrence of resistance or response to aggression—i.e., coercion calculated to bring appeasement. Such results can be achieved by an aggressor by his making credible threats of damage and loss that are assessed by the threatened nation as not worth the risk and sacrifice that resistance would entail. For example, at Munich in 1938 Hitler's coercion deterred Czechoslovakia, France, and Britain from resisting his demands.

Stability and balance between nations are changeable conditions and can be quite ephemeral. Our strength, which maintains the present balance and deterrence, is the result of long-term planning and dynamic action, particularly in the technological field. To ensure that balance is continued, we never can relax and assume that the balance we attain in any year, with its concomitant deterrent effect, will automatically continue for long without our taking actions to maintain it.

In the present world balance, nuclear weapons are the principal factor of strength. Superiority in them, both in their numbers and in sophisticated delivery systems, is now essential to our security. So long as there is a significant advantage to a first strategic nuclear strike by our forces if we should be vitally challenged—as by aggression in NATO Europe—we can be considered to have strategic military superiority. We have had it, we have it now, and our technological capability can likely provide it in the future if we continue to put forth the necessary effort. But nuclear weapons by themselves cannot insure our security—essential though they are to it—because Soviet Russia's significant capability in nuclear weapons in part balances out our capabilities. Therefore, we cannot be sure that our nuclear weapons alone will deter in lesser conflicts and we have to maintain a broad range of military capability.

Some people claim that nuclear weapons or any kind of weapons in themselves endanger the world and cause instability. But is this really so? Does not the cause lie far more in the objectives of nations that through their

greed seek expansion and control beyond their own boundaries? Is either Canada or Mexico afraid of the U.S. because we are heavily armed? No. But are Russia and China afraid of one another? Yes, because of the objectives of each. And are their neighbors afraid of them? Yes, not simply because they have arms but because they also have objectives to undermine, control, and expand.

The abolition of any particular weapon system would not in itself necessarily bring peace or more stability. In fact, if nuclear weapons were negotiated away in an arms control agreement, some other form of military power would have to assume a strategic role until the time comes—if it ever does—when military force is not a major factor in our keeping stability and balance in a world still threatened by expansionist nations.

An arms race of some kind will likely continue so long as there are aggressive, expansionist powers. This will be so even if arms control agreements are reached. The aggressive powers will try to gain advantage within the limits of the agreements, and the nonaggressive powers will have to try to ensure that they do not. Only when there are no longer aggressive, expansionist nations will there be no arms race.

OUR STRATEGIC strength is not useful only in war situations—although war would provide the supreme test. That strength is a vital factor in all relations between us and other nations, up through major confrontations and crises of any degree. International interactions are conducted at many levels with many nations. The outcomes of such interactions are usually more dependent upon our strengths than upon the skills of our negotiators. A man with the skill of Talleyrand might make the most of his country's advantages or minimize its disadvantages, but diplomatic skill alone cannot compensate for a position of basic weakness. Stalin's challenge of "How many divisions does he have?" to a suggestion that the Pope's views be considered in World War II is typical of the pragmatic approach to international relations by rulers to whom

strength and the will to use it are principally what count.

Aggressive nations seek to attain their objectives by threat of force rather than actual use of it whenever possible. Hitler tried and succeeded at Munich because he had superiority of will and the appearance of superiority of strength. Khrushchev tried to achieve a major change in the strategic balance with his sneak move of strategic missiles into Cuba. He failed because we discovered the move in time, because we had a significant strategic superiority, and because we convinced the Soviets that our full strength would be used if necessary rather than tolerate missiles so near to us.

In Berlin, our presence and rights are maintained not by the small military forces we station in that city but by our overall strategic superiority and the Soviets' acceptance that our full strength might be used if hostilities broke out over infringement of those rights. So the harassment of our access to Berlin has for the time being been given up by the Soviets after repeated tests of our will. But we may well be tested again in the future if the Soviets estimate that either our actual strength or our will to use that strength has weakened.

Finally, our strategic strength plays a further vital role in actual conflicts such as Korea and Vietnam: our superiority deters the escalation of limited wars into larger wars. Thus, our strategic strength plays a basic and vital—though sometimes unrecognized—part in all aspects of our role in the world.

SOVIET RUSSIA gives the appearance from time to time of having accepted a position of continued strategic inferiority to us. She appears to relax her drive for superiority and to concentrate on promoting her objectives by indirect means, meanwhile struggling with her serious economic problems and her bitter competition with Red China for Communist leadership. But such appearances have proved to be illusions in the past and may well be again now. We should always work for a real détente with the Soviets, and we should not be misled by their temporary relaxation of pressure brought about by our possession of stra-

tegic superiority and our firmness in defending our interests and the interests of those dependent on us.

It has been postulated by some pundits, by some apologists for the Soviets, and by the Soviets' propaganda that they have had real cause to fear aggressive attack by us. But has this ever been logical? Had we had the intention to wage war, preventive or otherwise, against Soviet Russia, would we not have done so in the decade from 1945 to 1955 when we could have done so with little damage to our homeland? Therefore, has not the buildup of the Soviets' strategic nuclear forces really been to enhance their strength for their own ends rather than to deter us from an aggressive attack on them? Have they not hoped to gain strategic superiority or, lacking that, more freedom of action in their campaign for expansion?

The buildup of the Soviets' strategic strength has not brought "mutual" deterrence as some have claimed because we were already self-deterred. Neither has a "stalemate" developed any more than one has existed since 1945. We have not been deterred or stalemated because we planned no aggressive action; and we have been sufficiently strong not to have been coerced into appeasement. It is the Soviets who have been, and are still, deterred from open aggression by our significant strategic nuclear superiority—and Red China is now deterred, too, in areas covered by our commitments.

In NATO, the defense of Western Europe has always been predicated upon our superiority in nuclear weapons and their delivery means and the clear intention to use them, if necessary, to prevent the overrun of Europe. Thus, our nuclear capability has been the principal protection of Europe from the beginning of the North Atlantic Treaty in 1949, and it is still the principal protection today. However, the credibility of our use of our strategic forces in the event of attack on Europe was weakened as the Soviets' growing nuclear missile capability made it certain that in any strategic nuclear exchange we would suffer serious damage. Yet, so long as there is a significant advantage to a first strategic nuclear strike, the deterrent value of our nuclear forces against local

attack in Europe will still be crucial. Our technology should be able to keep providing that significant advantage.

From the Soviets' standpoint, it has never been rational to launch a local attack in Europe. By such an attack our strategic forces would be fully alerted and deployed, making them far less vulnerable to Soviet attack and far more effective in any counterattack by us. Further, a local attack in Europe would likely necessitate our launching a strategic strike in response. Although in even the best of circumstances we now could be seriously hurt, the Soviets can never count on our not making such a response—as the best of the alternative courses of action left open after their aggression in Europe—so long as there is a significant advantage in such a first strategic strike. This is the essence of our deterrence in Europe and in all other areas covered by our commitments against Soviet aggression.

If the time should ever come—either through our unilateral reduction in strategic military strength, through agreed arms control, or through Soviet technological breakthroughs—when there would be no significant advantage to our first strategic strike provoked by local Soviet aggression, then a true strategic stalemate could result. Then we would have to increase some other factor of strength to keep a strategic balance that would still deter Soviet aggression, such as vastly increased tactical army, navy, and air forces stationed at critical points around the world. It should be apparent that, if Soviet Russia should ever gain equality with us in strategic strength—let alone superiority—this strength, combined with her expansionist drive, her ideology, and her unscrupulous totalitarian approach to world affairs, would give her crucial advantages over us and the rest of the Free World. The same would be true of Red China. Such an achievement by either of these nations would not only jeopardize our security but would be seriously destabilizing in all world affairs.

Soviet Russia and Red China in their propaganda attacks frequently rail about our preparing for aggressive war, and they call for nuclear disarmament and agreements against the first use of nuclear weapons in war. We

should recognize these attacks as clever efforts to reduce or limit the value of our strategic superiority by weakening it or our will to use it and causing our friends and supporters in the Free World to lose confidence in us. Surely the Soviets and the Red Chinese who are knowledgeable in world affairs appreciate that we basically do not threaten them. But with their ideological outlooks they need a principal enemy. Since we are the strongest nation in the world and the principal bar to their worldwide goals, we will continue to be proclaimed their principal enemy—unless in their ganglike struggle for Communist leadership they elevate each other to top place and relegate us to being their secondary target.

Some pundits have welcomed the growth of the Soviets' strategic capability and have urged us to reduce our strength so there would be equal capability between us. They rationalized this as a "stabilizing" and "tension-lessening" move. Surely these people have wrongly equated the objectives and motives of the two countries, and in so doing they have disregarded the difference between the roles and strength needs of aggressive and nonaggressive major powers and also have misread the real causes of stability and instability in world affairs.

IN REGARD TO Red China, the most vocally belligerent of powers in the world, somewhat different strategic relationships prevail. Red China is a weak nation in basic economic development and real strength factors that should have effect in international affairs. Her huge population may comprise a great deal more of a handicap than an asset in her status as a world power, even though the huge numbers frighten some people. Although weak economically and militarily, Red China can accomplish a great deal despite her weakness unless her bluster, threats, blackmail, propaganda, and instigation and support of subversion are effectively countered. And we are the only power in the Free World with the strength and position to counter Red China effectively. To do this, our strategic superiority is vital.

In a few years, Red China will likely have a small number of nuclear weapons and a limited means of delivering them to peripheral areas. The main purpose of this nuclear capability will be political and psychological, to create an image of great strength and provide a means for coercion and blackmail of her neighboring countries and, hopefully, for influence on us and on Soviet Russia.

In the next decade Red China may acquire some limited means of delivering nuclear weapons against us by long-range missile, long-range bomber, surface ship, or submarine. It is unlikely that these means will be either extensive or very accurate, and we should by then have devised an effective defense against what capability they do develop.

Thus, between us and Red China, the balance is, and can remain, very heavily in our favor. We can retain the capability to destroy elements of China to any degree we choose, without risk of any comparable damage to us. Thus, it would be completely irrational and irresponsible for Red China's leaders to challenge us in such a way as to bring our strategic forces into play. That is why Red China is so conservative in actions in contrast to her blustering talk. She is most unlikely to enter the war in Vietnam overtly because she can now be quite certain that Red China would not be regarded as a sanctuary from our retaliatory strikes. So, from her standpoint, why should she lose her nuclear plant and limited industrial and transportation facilities—to the extent that we would choose to destroy them—through entering openly into the Vietnamese conflict and provoking us to retaliate strategically? Too often people magnify out of all proportion the limited danger from a weaker power such as Red China and the damage she could do to us; they do not look at the implications which the Red Chinese must inevitably look at in weighing our strengths vis-à-vis their own.

Clearly our strategic superiority over Red China is even more effective than our superiority over Soviet Russia, even though the political aggressiveness and propaganda blusters of the Red Chinese presently obscure this fact for many people.

WHAT of the future?

We face decades, perhaps generations, of challenge, turmoil, and potential conflict. For us not only to survive but to preserve our way of life, we are going to have to maintain our strategic superiority.

We must take note that the Communist World has changed considerably in the last twenty years. It is no longer monolithic as it was in Stalin's day. The split between Soviet Russia and Red China is serious and probably long-lasting. The smaller Communist countries are no longer willing to adhere blindly to Moscow's or Peking's policies. The Communist parties in the non-Communist world are also no longer dutifully following any central line. However, they are all anti-U.S., anti-democratic, antifreedom, and antidiversity, and most of them are out to erode the Free World. Such changes as have occurred in the Communist World have been brought about, in part, by our actions and our persistence over the past twenty years. But the competition between the Communist World and the Free World continues apace. To contribute to the further evolution of the Communist World—hopefully toward a peaceful orientation—we must win the competition, and to do so we must maintain our strategic superiority.

But the maintenance of strategic superiority is no easy task. It requires the vigorous search for and exploitation of advanced technology, primarily in the military fields and secondarily in the economic fields. It also requires the constant tending of the intangible elements, such as will and persistence. We have not reached—we do not now have the prospect of reaching—a plateau of achievement from which we can confidently count on being secure without striving mightily through every feasible means to maintain a margin of superiority in the areas vital to our security.

Thus, a most important arena of our competition with Soviet Russia will continue to be in technology. We cannot now foresee in what areas the crucial technological developments will occur. All forms of military strength will likely have to be maintained and the military equipment constantly improved as much as

technological developments and our resources will permit. If we should relax and coast on our past achievements, hoping the Soviets would do the same, we would risk the possibility that they would achieve some technological breakthrough that would give them strategic superiority over us. They are undoubtedly still striving mightily to do just that. So long as they continue to have our downfall as their goal, dare we run the risk of their succeeding?

What of nuclear weapons? It appears that they are going to be a principal factor in the world indefinitely. It also appears likely that they are going to proliferate to more nations, despite all our efforts. For the sake of our security and position in the world, have we really any other choice than to continue vigorously the further development of nuclear weapons, the delivery means, and defense capabilities against them? Only thus can we retain our vital superiority and insure against any development by Soviet Russia or Red China that would negate or radically degrade this vital element of our strength and security.

What of other areas of development? Outer space promises to be another important field contributing to our strategic strength. It is our policy not to put military weapons into space. This is also the agreed policy of Soviet Russia and of all members of the United Nations. Yet we must insure the capability to eliminate from space any weapons that any nation might put there. If we do not have such a capability, the temptation might be irresistible for Soviet Russia or Red China or some other nation to violate the agreement and put weapons into space—for the tremendous strategic advantage and the corresponding politi-

cal and psychological leverage that they could provide.

Because of the prestige and psychological values of space achievements, we have strong cause to continue our space activities in a dynamic manner. In many ways, frequently intangible, our successes in space enhance our prestige and project an image of technological brilliance throughout the world. This in turn helps us politically, psychologically, and to some degree economically. Also, from our space achievements are likely to come great benefits for us and the rest of the world in communications, in forecasting weather, and in many areas of new scientific knowledge. Columbus's discovery of the new world set off a long era of exploration. Our explorations in space may well not only help insure our security in freedom but also add to knowledge of our environment and develop new technology that will enrich all mankind.

Superiority in strategic strength should not be all we seek. We must continue to deal with our problems of internal social and technological progress. Also we must help—within the capabilities of our great resources—the poor nations to deal with their complex, serious problems. And we must do what we can, wherever we can, to help mankind build an international community where freedom can flourish in diversity and where conflict is resolved by just, legal means. But these things will take a very long time. Meanwhile, we must keep our overall strength superior to that of our challengers, for the security of our own future and for the future of much of the world as we would like to see it.

Santa Barbara, California



PHƯỚC TUY NGÀY 10
THÁNG 11 NĂM 1966
THÂN GỬI CÁC BẠN
THUỘC C.41

Tôi Đào Văn Rốc người Xã
Ngãi Giao, Quận Đức Thạnh-
Tỉnh Phước Tuy, trước thuộc
đơn vị Địa Phương C. 41 Quận
Châu Đức đã ra hồi chánh ngày
2 tháng 11 năm 1966 và được
chánh quyền đón tiếp niềm nở
tại Trung Tâm Chiêu Hồi tỉnh
Phước Tuy.



CHIEU HOI:

THE SURRENDER PROGRAM IN VIETNAM

GARRY D. BREWER

Phuoc Tuy, 10 November 1966

TO ALL MY OLD FRIENDS IN THE C.41

I am Dao Van Roc of Ngai Giao hamlet, Duc Thanh district, Phuoc Tuy province. I was formerly with the C.41 in Chau Duc district. I rallied to the GVN on 2 Nov 1966 and was warmly welcomed at the Phuoc Tuy Chieu Hoi center.

THE importance of a viable and effective surrender program as an alternative to continued guerrilla hostilities has been demonstrated in the Philippine Huk Campaign of 1946-52 and in the Malayan Emergency of 1948-60. Although in both instances the political, military, and environmental elements were unique, some of the lessons learned are proving relevant to the current surrender program of South Vietnam known as *Chieu Hoi*.¹

In the Philippines, Ramon Magsaysay's rise to power in 1950 as Secretary of National Defense marked the turning point in the government's anti-Huk campaign.² Under Magsaysay the government was made into a more effective fighting and administrative force in an effort to carry the war to the Huk and to perform better and more equitably the expected functions of government. Magsaysay also inaugurated his "Attraction Program," making a clear-cut alternative available to these same Huks for the first time since the conflict had begun. Until then, the government had pursued a narrow, no-alternative policy of military suppression against the Huks. (A brief amnesty in 1948 had failed for a number of specific reasons.) The no-alternative policy had meant that few Huk prisoners were taken and surrenders were few and unusual. The Attraction Program meant that the Huk could choose to stop fighting with some honor and with some guarantee of benevolence from the government: amnesty, virgin lands, agricultural assistance under the Economic Development Corps Program (EDCOR),³ and other opportunities constituted the "attrac-

tions." The successful results of this Philippine experience clearly indicate the importance of

(1) formulating a behavior alternative for the hostile elements,

(2) creating a firm but benevolent image of the incumbent regime in an effort to legitimize it through internal reform and reorganization by the exercise of determined leadership, and

(3) gathering and acting upon information about the guerrilla organization infrastructure.

Two significant events of the latter sort were the seizure of the Manila-based Politburo-In in October 1950, as a result of effective military intelligence activity, and the infiltration and compromise of the financial organization by an agent of the Philippine intelligence.

The Malayan Emergency has left many useful points as a legacy for present-day counterguerrilla operations in Vietnam. The relatively small-scale Chinese terrorist (CT) force, estimated to have been on the order of 5000 to 6000 combatants, and the relatively few defectors recovered, about 2700,⁴ meant that the British could execute the now famous "Briggs Plan" utilizing a maximum number of civilian officials. The predominance of civil administrators and civil national policemen was a feature of the Malayan campaign that enhanced the separation and classification of surrendered enemy personnel (SEP) from the captured enemy personnel (CEP).⁵ By so differentiating defections from captures, the "prisoner of war" image was generally avoided. The SEP's were of great usefulness in terms of tactical intelligence and repenetration of

the jungle as members of Security Force units known as Special Operational Volunteer Forces. British ingenuity came to the fore in the many diverse techniques and methods employed to secure defections. Loudspeaker aircraft or "voice craft" were used extensively to broadcast taped and live appeals from recent defectors to their former units. Personal family appeals were similarly made known, thereby capitalizing upon the characteristic Chinese attachment to family. Highly tactical⁶ leaflets were dropped from aircraft, left by ground troops, and otherwise widely disseminated to insure that the government's surrender terms were understood, to tell the CT how to go about defecting, and to inform the largely pro-CT local Chinese population of the basic choices afforded the fighters and their supporters. A generous system of rewards and bounties was also developed to enhance the flow of defectors and to add to the CT's general sense of insecurity.

A third experience, that of the French in Algeria, provides a somewhat negative lesson. With a clear-cut position of military superiority, the French under General Challe by mid-1959⁷ had adopted a firm, fear-inducing military campaign designed to (1) destroy the guerrilla communications, (2) destroy the guerrillas, and (3) re-educate captured guerrillas.⁸ This narrowly focused effort did satisfy most military objectives, but it was woefully inadequate in the crucial political and psychological areas. Thus the French in Algeria, by their failure, make a pressing case for an integrated political-psychological-military effort.

Chieu Hoi, 1963-65

The first official Government of Vietnam (GVN) reference to *Chieu Hoi* came in former President Ngo Dinh Diem's *Tet* or Lunar New Year speech of 26 January 1963. An official Vietnamese decree of the following April outlined the basic elements of *Chieu Hoi*, which remain, interestingly enough, little changed to this day. The broad purposes of the effort were much like those of the surrender program in Malaya, reflecting the assistance and experience afforded the United States Mission and

the GVN by British and Australian veterans of that emergency. Most notable of this group is, of course, Sir Robert Thompson, who has served as a special adviser in Saigon for several years. Stated very generally, the *Chieu Hoi* surrender program is intended to

- weaken the Viet Cong as an effective fighting force
- create dissension and mistrust within the guerrilla political-military organization
- gather useful intelligence about guerrilla personnel, supplies, and techniques
- build an image of the Government of Vietnam that is firm but benevolent
- reintroduce the returnee into the mainstream of life under the GVN.

Chieu Hoi in the 1963-65 era was plagued by a peculiar set of debilitating circumstances. The Diem regime's well-known no-compromise attitude toward its political opponents did little to infuse in government personnel a sense of "open arms" or forgiveness. Further supporting a general sense of impotence on the part of *Chieu Hoi* officials, who had been charged with the achievement of the five stated goals, was the fact that the administrative machinery was submerged within other elements of the government, resulting in little high-level support or interest and a high turnover of personnel. In spite of its buried status within other administrative services (Figure 1) and its relatively low priority, *Chieu Hoi* accounted for some 11,248 returnees in 1963, 5417 in 1964, and 3192 in the first six months of 1965 (up to the June coup that brought the Ky government to power).⁹ The trend was definitely not favorable and mirrored the generally deteriorating military situation and increasingly unstable political situation.

Joint United States Public Affairs Office (JUSPAO)

Created in early 1965 by order of President Johnson and placed under the overall direction of Carl Rowan, head of the United States Information Agency at that time, JUSPAO has been an experiment in psychological warfare. Devoting much of its energy to a revital-

Date	Name	Title	Cabinet or government
24/5/63	Ngo Trong Hieu	Minister for Civic Action; Chief of the Chieu Hoi subcommittee.	Ngo Dinh Diem
28/12/63	Gen. Tran Van Don	Minister of Defense	Nguyen Ngoc Tho
8/1/64	Col. Nguyen Van Chuan	Director of Psy War in the Ministry of Defense; Chairman of the Chieu Hoi subcommittee.	Nguyen Ngoc Tho
10/3/64	Col. Tran Ngoc Huyen	"	Gen. Nguyen Khanh
16/3/64	Col. Truong Van Chuong	"	Gen. Nguyen Khanh
21/5/64	Nghiem Xuan Hong	Secretary of State in the Premier's Office; Special Commissioner for Chieu Hoi .	Gen. Nguyen Khanh
27/8/64	Dr. Phan Huy Quat	Minister for Foreign Affairs; Secretary of State in the Premier's Office; Commissioner for Chieu Hoi .	Gen. Nguyen Khanh
10/11/64	Pham Van Toan	Minister of State in the Premier's Office; Special Commissioner for Chieu Hoi .	Tran Van Huong
16/2/65	Tran Van An	Minister for Chieu Hoi .	Dr. Phan Huy Quat
24/6/65	Dinh Trinh Chinh	Secretary of State for Psy War and Directorate General for Chieu Hoi .	Gen. Nguyen Cao Ky
27/7/65	Dinh Thach Bich	Assistant to Dinh Trinh Chinh and placed in charge of all Chieu Hoi .	Gen. Nguyen Cao Ky
13/7/66	Gen. Nguyen Bao Tri	Commissioner General for Information and Open Arms.	Gen. Nguyen Cao Ky

Figure 1. Chiefs of Chieu Hoi, abstracted from official decrees and appointments of the government of Vietnam from 1963 to the present

ization of *Chieu Hoi* and the Vietnamese psychological warfare effort, JUSPAO has ensured that an alternative to continued guerrilla warfare is available and is widely and readily understood. The organization is unique in that coordination of all psychological warfare ac-

tivities has been placed under the Director of JUSPAO. The policy of eschewing a "prisoner of war" image for returnees and of integrating political and psychological considerations into the information and surrender programs soon began to pay off. A summary of defections

from January 1963 to 31 March 1967 (Figure 2)¹⁰ shows the reversal of the downward trend and a definite increase in the number of Viet Cong opting for the cvx since mid-1965.

Chieu Hoi, June 1965 to the present

JUSPAO now works in close cooperation with the Commissioner General for Information and Open Arms and his administrative subordinates in the Vietnamese Information Service and in the various *Chieu Hoi* services (Figure 3). Mr. Dinh Trinh Chinh, the head of Psy War and *Chieu Hoi* from 24 June 1965 to 13 July 1966 (during which time it was a subunit of the Ministry of War), has been elevated to the important Central Executive Committee, where *Chieu Hoi* is now given top-level Vietnamese priority and attention. Thus the *Chieu Hoi* surrender effort is now recognized as a separate and essential instrument of the government.

The specific operational activities of *Chieu Hoi* have been executed by five services and seventeen functional bureaus (as shown in Figure 3). Of particular interest in this respect are the Intelligence, Armed Propaganda, Resettlement, and New Skill Training/Job-Finding Bureaus.

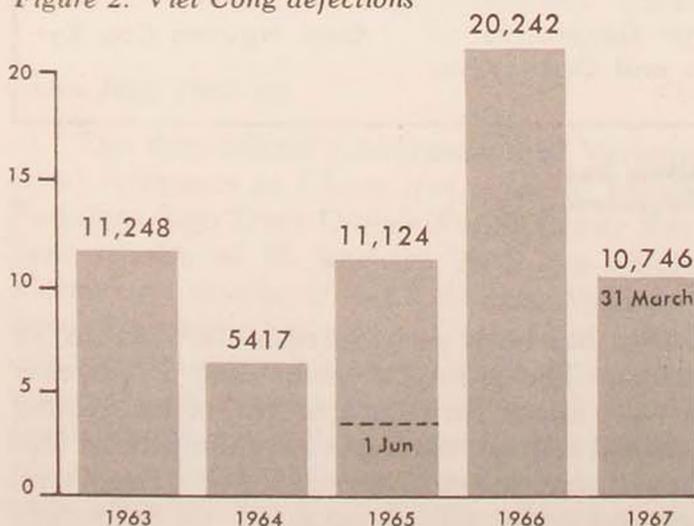
The Intelligence Bureau is generally patterned after the Special Branch operation of

the Malayan experience, i.e., a police perspective as opposed to a military perspective. In Malaya, enemy orders of battle and leadership biographies were obtained from defectors through detailed interrogations designed to cull out of the individual's history the reasons why he joined the movement, the identity and location of specific persons in the guerrilla units, and any other facts that might help to fill in these essential elements of intelligence.¹¹ To a currently voiced criticism about the overlapping and duplicative character of *Chieu Hoi's* intelligence function, one might point out a fundamental difference between military intelligence and the type of information needed by a civil-administrative, paramilitary, or police operation. As opposed to attempting to locate military units at some given point in time and space, *Chieu Hoi's* information gathering is aimed at longer range, more detailed, and infinitely more subtle objectives. In short, conventional military intelligence leaves much to be desired when one tries to develop, for example, intricate family relationships of known guerrilla leaders or when one is attempting to construct a detailed breakdown of a guerrilla unit's organizational infrastructure.

The Armed Propaganda Teams (APT's) represent a means by which selected *Quy Chanh* ("returnees") may engage in direct contact with families and friends of known Viet Cong guerrillas. (The Special Operational Volunteer Forces, composed of surrendered enemy personnel, had much the same purpose and demonstrated decisively the impact of this type of mission.) Organized into some twenty-four platoons with light defensive armament, APT's are used at the discretion of the province chief in whose area they have been assigned to operate. There have been problems connected with the use of APT's, largely administrative in character, including problems of training, recruiting, employment, command, etc.; but the potential for access to specific individuals within the insurgent ranks is unmatched. Who should know more about the enemy than ex-guerrillas?

To solve the problem of what to do with a surrendered Viet Cong, the Resettlement Bureau has developed a program that assists the

Figure 2. Viet Cong defections



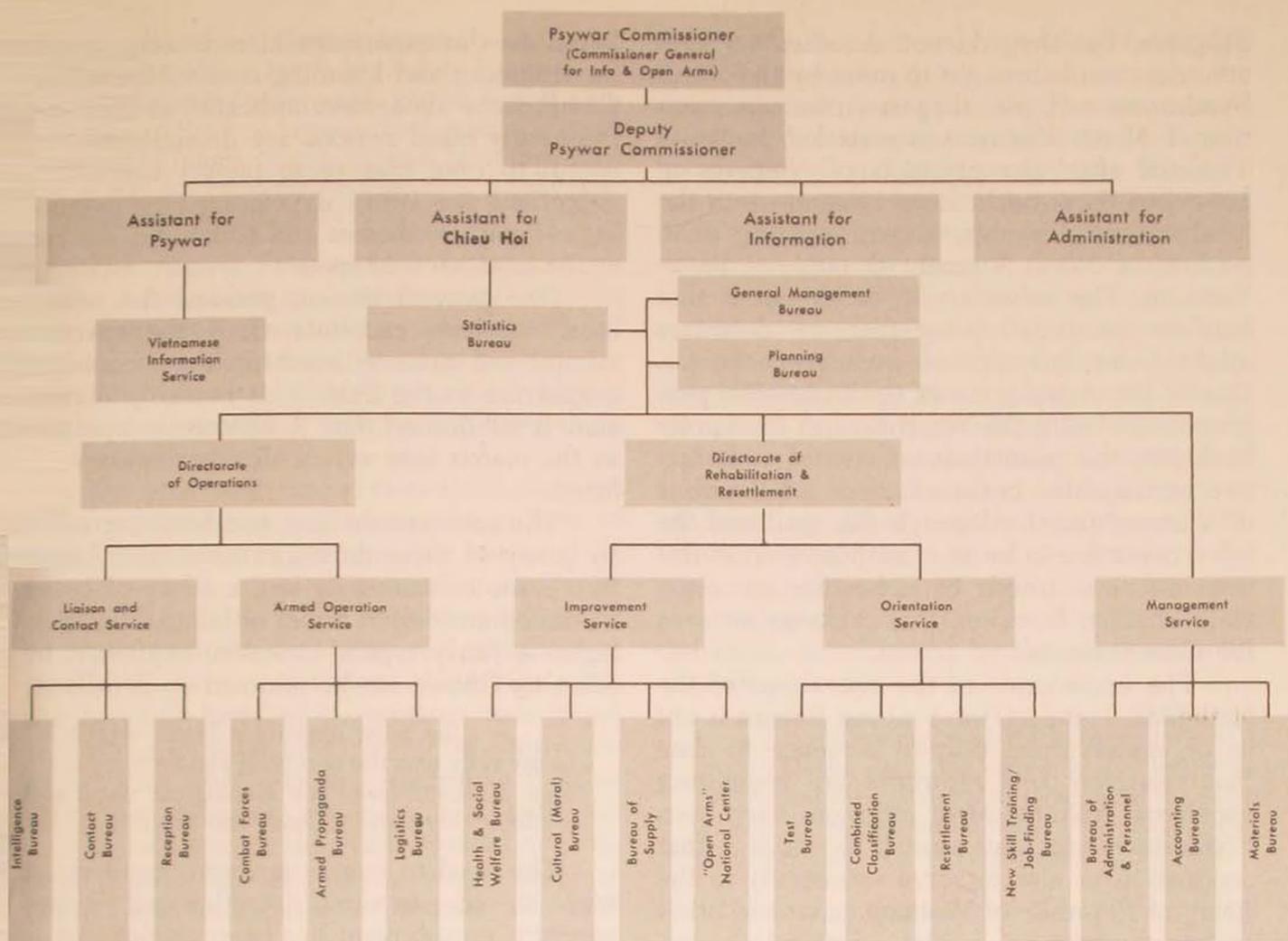


Figure 3. Chieu Hoi administered under Commissioner General for Information and Open Arms

defector and his family to relocate in government-controlled areas. This relocation is usually necessary only in those instances when the returnee's village is not under government control. In these cases the returnee and his family are accorded an allotment for house construction and a subsistence allowance for each family member for a period up to six months or until they are resituated. The Vietnamese have posited a long-range goal of one hamlet per province to be made up of returnees. Toward this goal, some eleven pilot hamlets are in various stages of funding and construction. Each of these hamlets will house about one hundred families.

These *Chieu Hoi* hamlets are advantage-

ous for several interrelated reasons. The task of accounting for and assisting returnees is facilitated by having them physically located in one area.¹² Also the placing of returnees in a common hamlet all but eliminates adjustment and reintegration problems with respect to non-returnee families.

The problems, nevertheless, are still considerable. The most obvious, of course, is the ease of access that these settlements provide for potential retaliatory acts by the Viet Cong. The unavailability of suitable land is another problem of some consequence in a country like Vietnam. It would be extremely fortunate indeed if the Vietnamese had the vast, secure, and rich farmlands that were available to the

Filipinos, but they do not. Another negative consideration is brought to mind by the North Vietnamese refugee villages: entire communities of North Vietnamese resettled in South Vietnam after the partition of Vietnam in 1954, but they did little to integrate into the local stream of events, instead creating small pockets of North Vietnam throughout South Vietnam. The inference to be drawn is that hamlets composed altogether of defectors might foster this type of exclusive behavior. One of the stated goals of the *Chieu Hoi* program is to bring the returnee and his family back into the mainstream of active, constructive participation in the affairs of the Republic of Vietnam (RVN). Although this goal and the inference seem to be at cross-purposes, at this time no clear trends or indicators are especially visible; however, this ranks as an area for some concern.

The importance of the operations of the New Skill Training/Job-Finding Bureau is not to be undervalued despite evidence to date that relatively few returnees are requesting vocational training. Most returnees have been rice farmers and have elected to return to that occupation or else to serve voluntarily in the Army of Republic of Vietnam (ARVN) or other government agencies. The worth of the retraining program is presently accounted for in its propaganda or exploitative value. Visible proof of a successful vocational retraining and placement program goes a long way in countering the persistent Viet Cong contention that defectors are imprisoned and then starved by the GVN. The job training available includes tailoring, auto mechanics, radio repairing, first aid, brick making, carpentry, shoe making, typing, and simple courses in animal husbandry and improved agricultural methods. These training and placement functions could be most important in the event of continuing large-scale defections or a reduction in the intensity and scale of hostilities.

reasons for defection

How does one go about getting a Viet Cong to defect to the GVN? What makes a guerrilla surrender? Tentative assessments,

based on the experience already acquired in interrogating and handling nearly 30,000 *Quy Chanh* since 1963, have indicated at least five frequently cited reasons for defection.¹³ It is useful to note that these factors motivating defections are being developed into psychological warfare themes and techniques for use at the local, tactical level.¹⁴

One general reason, perhaps the reason most regularly encountered, is the environmental and military hardship experienced as a guerrilla in the field. This hardship dimension is so diffuse that it effectively operates as the matrix into which all other reasons are fitted.

The constant shelling and bombing taken by many of these defectors have contributed to a sense of insecurity and a terror of being wounded and left to die or of being killed outright. A fairly typical reaction, expressed by one *Quy Chanh*, can be summed up as follows:

. . . the most important factor which led to my rally was the bombing and artillery shellings. I reconsidered my ideological stand and made up my mind to leave the Front.¹⁵

The need to work ever more regularly at night, in order to avoid detection and its concomitant punishment, has been singled out as another basic reason for surrender. Apparently the Viet Cong are not any more anxious than anyone else to operate at night and do so with some trepidation.

Family ties are strong in the Vietnamese society, and it is to return to family and friends that many a Viet Cong has become a *Quy Chanh*. The overall propaganda appeal has especially reflected this vulnerability in sentimental return-to-family leaflets. Direct contact is also made with the families of known Viet Cong, and then tape-recorded messages from them are airborne into areas where their relatives in the Viet Cong are known to be operating.

To a question aimed at determining how better to effect surrenders, the same *Quy Chanh* offered these fairly typical opinions:

The most important thing is to assure them of safe conduct when they come out. . . . Appeals from families and their own lead-

ers are the most effective. I myself waited until I got word from my father before I rallied.

Appeals from parents or wives and children are the best because they were all homesick and family bound. Appeals from their own leaders are excellent because they would trust their own leaders more than regular leaflets.¹⁶

The Armed Propaganda Teams, as already stated, have as a fundamental mission the contacting of families and friends of known guerrillas to explain *Chieu Hoi*, by their very presence offering tangible evidence of the treatment that will be accorded them by the government.

The fifth basic reason commonly cited for defecting could be loosely classed as "loss of faith." As military pressure has mounted in recent months, an ever increasing incidence of this attitude or mood has been evidenced as contributing to defections. One might cautiously allude to this fact in helping to catch the flavor or trend of the greater mass mood or pattern of what to expect. This dimension at the very least provides suggestive insights into these more complex issues and questions.

In response to these five typical or common reasons for defecting, a whole range of themes and attraction techniques has been developed.

attraction techniques

In a broad sense, the whole information and psychological warfare effort might be viewed as an attempt to win the entire Vietnamese nation over to the government side. From this perspective, leaflet and poster appeals stressing legitimacy¹⁷ themes (such as CVN development projects or efforts to improve political participation and representation) may be seen as having some diffuse effect on the attraction of Viet Cong to the *Chieu Hoi* program. Of more direct importance would be the highly tactical, tightly focused appeal which has rapidly become the backbone of *Chieu Hoi*.

In an analysis of leaflets and posters produced at the national (Saigon) level for distribution to specific areas around the country, it has been found that several primary themes

dominated the materials specifically oriented toward *Chieu Hoi*.¹⁸ Not too surprisingly, the three themes most commonly encountered were return-to-family, environmental and military hardship, and isolation appeals. Throughout the year 1966, leaflets frequently employed pictures and handwritten messages from the returnee to his specific unit and often to specific individuals within that unit. Taped loudspeaker messages were being broadcast from aircraft, jeeps, and small boats in a like manner, disseminating the spoken word of returnees. A typical *Quy Chanh* message would include reassurances that the government had treated him well and that he had received medical and other required assistance. This uncertainty of treatment at the hands of the government is a salient point in the minds of many, if not most, *Quy Chanh* prior to their defection, as indicated by the one previously quoted:

I was very much afraid because [when] I was with the Front we were told and informed that when we rallied to the CVN one of the three following things would occur: (1) death, (2) imprisonment, or (3) getting drafted. [sic]¹⁹

Because a great many of the Viet Cong defect to Rural and Popular Force (paramilitary) units and because the awareness of forgiveness and *Chieu Hoi* (open arms, welcome return) somehow has not trickled down to many of these long-suffering, often-attacked rural outposts, a major re-education campaign has been undertaken. Among other things, short and simple cartoon-type movies explaining *Chieu Hoi* are being shown to all paramilitary and regular troops of the RVN armed forces in hopes of furthering the surrender program. Discernible in the leaflet appeals is a clear trend toward considerations of an immediate and personal nature (e.g., escape, care, and treatment when rallied) and a corresponding trend away from more abstract appeals (e.g., nationalism or fear of overt Chinese intervention). The face-to-face perspective of *Chieu Hoi* is perhaps emerging as one of its key characteristics.

In a representative week, 25 September-1 October 1966, JUSPAO printed over 5.8 mil-



A USAF U-10 of the 5th Air Commando Squadron drops thousands of psychological warfare leaflets over Viet Cong positions in South Vietnam.

lion leaflets and posters for use in Vietnam.²⁰ This total did not include the many small-scale production efforts fostered at the local level. Typically the Vietnamese and U.S. military psychological warfare battalions and Vietnamese Information Service and U.S. civilian psychological warfare personnel produce sim-

ple, highly tactical messages under their own cognizance in the field. This practice not only complements the “grass roots” nature of *Chieu Hoi* but also significantly reduces the time lag required to produce an appeal.

results and observations

One phase of the First World War has been referred to as the “war without weapons, in which the use of leaflets reached spectacular proportions. All told, 65,595,000 leaflets were

snowed over the German lines."²¹ In one massive, concerted effort between 9 and 31 January 1966, more than 132,418,000 leaflets and posters were disseminated in the Republic of Vietnam. This prodigious effort supported last year's *Tet* campaign.²² In short, during little more than three weeks in Vietnam, more than twice as many leaflets were used as had been used by all the Allied nations in the entire First World War. (From time to time wholly unconfirmed reports circulate to the effect that some Viet Cong have defected so that they will not have to keep policing up leaflets that have been dropped all over the place.) During the 1966 *Tet* campaign, from 1 January to 11 February, some 1882 returnees rallied to the government side, then an all-time high for the program. In a similar period of time this year's *Tet* campaign netted 3456 returnees.²³ To put this latter figure into proper context, the number of defectors that rallied to the CVN in the two preceding months should be noted: November 1966—2505, and December 1966—2516.

The defection trend over the last year is generally encouraging; however, one must consider the fact that most of these are *not* the leadership elements, i.e., the cadre. It is one thing to entice a teen-age farmhand of limited and recent military exposure to respond to the CVN's appeal; it is quite a different thing to convince a battle-hardened, well-disciplined, and thoroughly politicized officer or political cadre that the strife and struggling of a lifetime are no longer worth the effort.

When those key elements in the National Liberation Front organizational structure begin defecting in considerable numbers, then and only then will the end be somewhere in sight. To hasten this process in Malaya, the British quite regularly offered high status and leadership jobs to CT cadre personnel. Also the reward or bounty offered for these individuals was extraordinarily high in comparison to that offered for the average guerrilla.

It is a fairly well recognized and rather bothersome fact that the absentee rate in the RVN armed forces has been substantial. As a matter of interest, the National Liberation Front in South Vietnam has a regular proselyting program known as *binh van*. Douglas Pike sets the ARVN desertion rate in the years 1960–63 at about 400 soldiers per month.²⁴ The frequently heard explanation that an AWOL soldier has merely "gone home for *Tet*" or "gone to help with planting or harvesting" in no way whatsoever mitigates the hard fact that the government has lost the services of one man. What this suggests is the need for some type of a "net flow" concept, whereby Viet Cong defections are balanced against this kind of government loss. While there may not be an exact one-to-one correspondence, there must be some allowance made for these losses if a more accurate understanding of the overall situation is to be achieved.

Another valid and perhaps obvious consideration is that *Chieu Hoi* (or any other surrender program) cannot stand alone and apart from the full diverse range of efforts being pursued in an attempt to put down a guerrilla war. In short, *Chieu Hoi* is but one important facet of the greater complex operation. That it contributes to a resolution of the conflict in some degree is indisputable; wherever any genuine and reasonable offer of amnesty and rehabilitation has been made to obtain guerrilla surrenders, there has been at the very least some positive, recognizable payoff.

Besides the favorable propaganda effect afforded by the numbers, rates, and trends in defection statistics, the underlying importance of *Chieu Hoi* is in its providing a clear-cut alternative to continued hostilities and its forcing the incumbent regime to maintain a modicum of conciliation toward dissident individuals, while simultaneously combating the more inclusive hostile movement.

New Haven, Connecticut

Notes

1. *Chieu Hoi* has been interpreted as "open arms." The literal meaning of the term is "welcome return." The entire program has been called *Chieu Hoi* to indicate the spirit or attitude

that the government is supposed to hold with respect to the returnee or *Quy Chánh* (or alternatively, *Hoi Chánh*).

2. For a good general summary see Napoleon D. Valeriano

and Charles T. R. Bohannon, *Counter guerrilla Operations: The Philippine Experience* (New York: Frederick A. Praeger, Inc., 1962).

3. Maynard W. Dow, Major, USAF, *Nation Building in Southeast Asia* (Boulder, Colorado: Pruett Press, 1966), pp. 89-125.

4. *Malaya Mail*, Kuala Lumpur, 30 July 1960. [Special "Roundup" issue on the Emergency]

5. Cf. Lucian W. Pye, *Lessons from the Malayan Struggle Against Communism* (Cambridge, Massachusetts; CIS/MIT, Communist Bloc Program, C/57-17: n.d.).

6. "Tactical" leaflets are those addressed to specific units or even particular persons within units in a given geographical area, useful within a limited time frame.

7. A. H. Peterson, et al. (eds.), *Symposium on the Role of Airpower in Counterinsurgency and Unconventional Warfare: The Algerian War* (Santa Monica, California: The RAND Corporation, July 1963), pp. 9-11.

8. Andre Souyris, "Réalité et aspects de la guerre psychologique," *Révue Militaire d'Information*, CCCII (February 1959), 20-21.

9. *Mièn Nam Tu Do* ("The Free Southern Region"), Saigon, 20 January 1967, p. 1.

10. Data for the years 1963-1966 (inclusive) are from *Mièn Nam Tu Do*. Fragmentary data for 1967 until 31 March are from Monte L. Osborne, Chief, Statistical Section, *Chieu Hoi* Division, Office of Civil Operations, USAID/Vietnam, 5 April 1967. Personal correspondence.

11. J. B. Perry-Robinson, *Transformation in Malaya* (London: Secker and Warburg, Ltd., 1956), pp. 159-62.

12. Similarly, one of the key features of the EDCOR resettlement farms in the Philippines was just this clustering of ex-guerrillas in central locations. A fundamental difference, however, would be that four out of six EDCOR farms and the bulk of the persons involved in the resettlement were on Mindanao while the insurgency was essentially concentrated in the more populous portions of Luzon. The Briggs Plan for Malaya also had vast resettlement implications, but in that instance it was the masses who became the object of relocation under the New Villages scheme, which eventually resettled upwards of 500,000 persons.

13. Both the RAND Corporation and the Simulmatics Corporation are engaged in intensive analyses of defectors in

an effort to understand as thoroughly as possible the processes responsible for causing one first to become a guerrilla and then to reject this commitment by overt defection. The very general reasons cited in this article do not derive from either RAND or Simulmatics information but rather come from field interviews conducted by the author in 1965-66 while in Vietnam.

14. JUSPAO, "Viet Cong Morale and Vulnerabilities: June-December, 1965," *JUSPAO Guidances*, No. 9, Enclosure 1, Supplement 1 (Saigon, Vietnam: 27 January 1966), (mimeograph).

15. This individual was a Viet Cong Local Force platoon leader who had defected and was being interrogated in Dinh Tuong Province, 45 miles southwest of Saigon. A complete summary of the lengthy interrogation is found in "Studies of the National Liberation Front of South Vietnam," No. DT-70 (II) (Saigon, Vietnam: 18-19 August 1965), (mimeograph), p. 44.

16. *Ibid.*, pp. 8-9.

17. The term "legitimacy" may be understood in this usage: ". . . power . . . wins its title to be legitimate only by conforming to what is in the general view the legitimate form of Power; it wins its title to be beneficent only by making its ends conform to those which men in general esteem; . . . its only strength is, at any rate in most cases, the strength which men think it their duty to lend to it." Bertrand de Jouvenal, *On Power* (New York: Viking Press, 1949), p. 25.

18. G. D. Brewer, "A KWIC (Key Word in Context) Content Analysis of Propaganda Materials Sampled from the Vietnamese Conflict" (unpublished research paper; Yale University, February 1967).

19. "Studies of the National Liberation Front of South Vietnam," p. 27.

20. JUSPAO, Field Development Division, "Weekly Report: September 25-October 1, 1966," (Saigon, Vietnam, n.d.), (mimeograph).

21. Harold D. Lasswell, *Politics: Who Gets What, When, How* (New York: Meridian Books, The World Publishing Co., 1958), p. 41.

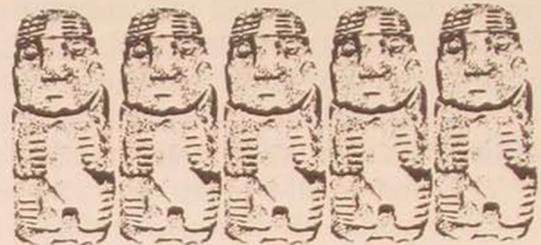
22. USAID, "Monthly Report on Status of Rural Construction Program" (Saigon, Vietnam, February 1966), (mimeograph).

23. *Ibid.*; also personal correspondence, Monte L. Osborne.

24. Douglas Pike, *Viet Cong: The Organization and Techniques of the National Liberation Front of South Vietnam* (Cambridge: The M.I.T. Press, 1966), p. 255. [Cf. pp. 253-68 for *binh van*.]



CANADA AND THE ORGANIZATION OF AMERICAN STATES



DR. LUDWIK J. KOS-RABCEWICZ-ZUBKOWSKI

THE FINAL act of the Third Special Inter-American Conference held from 15 to 27 February 1967 at Buenos Aires, Argentina, contains Resolution II entitled "Tribute to Canada on the occasion of the first centennial of the signing of the British North America Act, which established the Canadian Confederation." Adopted unanimously, the resolution acknowledges that Canada "occupies an outstanding position among the nations of the Western Hemisphere" by reason of "1) its high cultural level, 2) its accelerated agricultural and industrial development, 3) the stability of its democratic institutions, and 4) the cordiality of its relationships with the other American states." The conference resolved "To salute the noble Canadian nation, and . . . To pay a special tribute of admiration to the people of Canada for their valuable contribution to the peace and progress of the Hemisphere and of the world."

Delegations from twenty governments were accredited to the conference: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, United States

of America, Uruguay, and Venezuela. The governments of Canada, Jamaica, Trinidad and Tobago, Guyana, and Barbados were represented by observers, as were the Secretary General and specialized agencies of the United Nations and other official inter-American organizations and entities. Non-American countries and other international agencies also sent representatives, who were granted facilities and courtesies so that they could follow the conference work.

The flattering Canada resolution cannot be explained entirely by the well-known chivalrous Latin American courtesy and propensity for elegant language. It confirms at least good friendly Canadian/inter-American relations.

This tribute prompts a review of the perennial subject of the possibility of Canada's entry into the Organization of American States (OAS). Many factors must enter into the decision.

Canada and Latin America

There are several changes in the Western Hemisphere and elsewhere which warrant a

new examination of Canadian/inter-American relations, among which must be mentioned: the Protocol of Amendment to the OAS charter of 27 February 1967; the decision adopted at the April 1967 Punta del Este Conference, to transform the present Latin American Free Trade Association into a European-type common market; the emergence of independent American states, members of the British Commonwealth; the application by the United Kingdom to join the European Economic Community; Canadian participation in inter-American organizations and projects; development of Canadian-Latin American trade and transportation links and of Canadian missions in Latin America; investments of Canadian private capital in Latin America.

The association of North, Central, and South American states was founded in 1899 as the Commercial Bureau of the Americas; in 1910 the name was changed to Pan American Union (PAU), and in 1948 to Organization of American States.

At the founding convention of the United Nations in the spring of 1945, the Latin American delegates decided not to surrender the PAU's powers for collective action to the new United Nations. In consequence the right of "regional self-defense" was written into article 51 of the U.N. charter.¹ The treaty of reciprocal assistance, known as the Rio Pact, signed by all PAU member states at Rio de Janeiro in April 1947, was the first binding treaty, in contrast with previous "agreements" or "resolutions" of prewar inter-American conferences.² The pact's geographical scope, as defined under article 4, covers Canada whether or not Canada is a member, which is a significant feature in that previously the Monroe Doctrine and inter-American conferences of the PAU had excluded from the inter-American group the European and British colonial possessions and self-governing territories.³

The new attitude towards Canada was demonstrated at the founding conference of the OAS in 1948 at Bogotá, Colombia, when the general Latin American opinion was in favour of Canada's entry. The delegate of El Salvador as well as the delegation from the United States suggested replacing the word

"republics" with "states," so as to continue accurately reflecting the membership if Canada joined the organization.⁴

Although Canada did not join the OAS, it has participated in inter-American activities. Even before Canada began to establish its own direct diplomatic relations, it had trade representatives in Latin American countries—in Buenos Aires in the last century and in several other capitals before World War I. Trade with Latin America has trebled in the past 20 years, both in sales and in purchases. In 1965 Canada exported \$315 million worth of goods to Latin America and imported \$411 million worth.⁵ Canada has joined the United Nations Economic Commission for Latin America (1961), the Pan-American Institute of Geography and History, the Inter-American Statistical Institute, and the Inter-American Radio Office.

Since November 1965 Canada has been represented by official observers at conferences of the Organization of American States, and the Canadian government has good working relationships with the OAS Secretariat. Canadian officials keep in touch with a wide variety of other developments in Latin America, too. Thus representatives of the Canadian Department of Labour attended the OAS Second Conference of Ministers of Labour in Venezuela in May 1966. Canada's interest in religion in Latin America has been increasing. Some 1500 Catholic Canadian clerics, parish priests, teachers, nurses, and social workers, both men and women, are active in various Latin American countries. Representatives of the Baptist Church in Canada have been in Bolivia for some 60 years. Various Canadian evangelical churches run hospitals and schools and other institutions in Latin America. Canadian students work in Latin America through the Canadian University Service Overseas.⁶ As early as 1931 Canada became a member of the Postal Union of the Americas and Spain, a regional organization linked with the Universal Postal Union but not associated with the OAS.⁷

A Canadian observer group attended a special meeting of the Inter-American Economic and Social Council (ECOSOC) held in Uruguay in 1961, at which the Alliance for

Progress was launched as a cooperative programme of self-help, local reforms, development plans, and outside financial and technical assistance. Since then Canada has been represented by observers at the annual meetings of ECOSOC.⁸

Since 1964 a new dimension has been added to Canadian-Latin American relations in the field of loans carried out in conjunction with the Inter-American Development Bank. Canada has already put up more than \$40 million for loan funds in cooperation with the Inter-American Development Bank, which is acting as administrator on behalf of Canada.⁹ To date these interest-free loans have amounted to \$3,240,000 for El Salvador, \$1,260,000 for Ecuador, \$800,000 for Paraguay, \$756,000 for Argentina, \$540,000 for Peru, \$1,620,000 for Bolivia, \$540,000 for Mexico, and \$4,320,000 for Chile. Furthermore the Export Credits Insurance Corporation obtained credits of \$15,000,000 for financing trade with Latin America.

In the field of private investment, Canadian capital continues to flow to various Latin American countries. It may be mentioned in passing that recently Canadian-Chile Mines S.A. has been created with a capital of \$2,900,000.

In the cultural field a special affinity exists between French-speaking Canada and Latin America, which share the same broad Latin culture and legal system based on the common model of the Code of Napoleon. Latin American studies have been introduced at several Canadian universities. In 1964 the Canadian government granted letters patent to the Canadian Inter-American Research Institute, having its seat at Montreal. Many Canadians study Spanish, and some study Portuguese.

Canada and the United States

It hardly needs recalling that Canada has extremely close ties with its only neighbour, the United States, and that these close relations result from geographical proximity, interchange of population, similar political philosophies, and the habit of resolving out-

standing problems by negotiation. After 1871, when the Treaty of Washington settled most of the points of disagreement between them, relations between the two countries rapidly improved. The last World War brought a change from a position of friendly cooperation to one of positive alliance. On 18 August 1940 the "Ogdensburg Agreement" established, with unique informality, a Permanent Joint U.S.-Canadian Board of Defence. The text of the agreement was published in the Canada Treaty Series and passed as an order-in-council, while in the United States the Ogdensburg Agreement was viewed as an executive matter that did not require the ratification of the Senate.¹⁰ The Board was established originally for the primary purpose of coordinating the plans of the two governments for the wartime defence of North America, but since the war it has gradually come to assume a somewhat different role, partly because of the changing nature of the task and partly because of the emergence of other bilateral consultative bodies in the defence field. Among these are the Military Cooperation Committee, established in 1946, the Senior Policy Committee on the Canada-United States Defence Production and Development Sharing Programme, and the Canada-United States Ministerial Committee on Joint Defence, both formed in 1958. After the creation of NATO the two countries, while actively supporting this multinational defensive alliance, continued to provide for the defence of North America on a bilateral basis, paralleling the joint defence organization established collectively by the North Atlantic Treaty Organization countries for Europe.¹¹ The Board was closely involved in the planning of the three radar lines—Pinetree, Mid-Canada, and Distant Early Warning (DEW)—which were successively constructed across the continent at increasingly northerly latitudes to give warning of attack across the arctic. The Board's role was less direct in the construction by the United States of the Ballistic Missile Early Warning System (BMEWS) with sites in Alaska, Greenland, and Britain, in the establishment of North American Air Defense Command (NORAD) in 1957, and in the resolution in 1963

of the troublesome problem of nuclear war-heads for Canadian weapon systems.¹²

Reconciling the requirements of continental defence with the various other objectives of North American society is a complex and delicate task, involving the careful consideration of many sensitive factors that often cannot be separated by the normal dividing line between military and political matters. It is in this area that the Board, with a mixed military and civil membership, has in recent years found its most useful role, a role not readily filled through any other of the several channels now available to the United States and Canadian governments for dealing with matters of joint concern.¹³

Many interlocking interests result from the links existing between the economies of the two countries—or rather from the impact of the United States economy on Canada.

It has been observed recently that among the factors which shape foreign policies of the United States and Canada three areas of contrast between the two countries can be distinguished: (1) the super-power status of the United States, which arises from great wealth and large population, as opposed to the smaller population and more limited power of Canada; (2) the bilingual and multicultural nature of Canada, as opposed to the more homogeneous makeup of the United States; and (3) the revolutionary origins of the United States, as opposed to the evolutionary development of Canada.¹⁴ While there is a great discrepancy between the power of the United States and that of Canada, Canadians do not consider their nation as any kind of satellite of the United States. They consider Canada to be a willing partner in an association to which it makes a contribution in the common interest commensurate with its resources and its points of view. From Canadian-United States discussions, negotiations, debates—and even disagreements—have come the most impressive results, as witness the gigantic Seaway stretching from the Atlantic to the heart of the continent, the immense Columbia River project, and the Canada-United States automobile agreement, which benefits the population on both sides of the border. Various

financial measures that necessarily affect both countries have been taken after Canadian-United States consultations.¹⁵

Canada and the Commonwealth Caribbean

Since the earliest times Canada has had a special affinity for and interest in the Commonwealth Caribbean. The economic and political development of Canada and the Commonwealth Caribbean countries has led to the broadening and deepening of the contacts and cooperation. These Caribbean countries have in recent years achieved full or partial political independence. The growth of industry in the West Indies has brought about a greater participation by Canadians in many fields, such as engineering, architecture, and science. The Canadian relations with the Commonwealth Caribbean cover the whole spectrum of economic activity, and there is in this relationship much of mutual profit to the Commonwealth Caribbean and Canada.¹⁶ Canadian exports to this area amounted to \$100 million in 1966. Canada has an important share of the West Indies import markets, averaging some 10 percent in 1966. The Canadian assistance programme for the Caribbean area was introduced in 1958 with an original commitment of \$10 million over five years. On the conclusion of the commitment on 31 March 1963, funds for the succeeding fiscal year amounting to \$2,100,000 were made available for Caribbean islands, as well as British Guiana (now Guyana) and British Honduras. When Canadian aid appropriations were increased in fiscal year 1964-65, an expanded programme for the Caribbean was approved, making available \$3,500,000 in grant assistance and \$5,500,000 in special development loans. The allocation in FY 1965-66 was \$4,500,000 in grants and \$5,500,000 in development loans. During 1965-66, a total of \$1,970,000 was spent on technical assistance, financing 130 Canadian teachers and advisers in the Caribbean and 431 Caribbean students in Canada.¹⁷ On a per capita basis, Canada's aid to Commonwealth Caribbean countries now exceeds that made to any other area.¹⁸ The Canadian Secretary of State for Exter-

nal Affairs, the Honourable Paul Martin, stated recently that while Canada desires to strengthen its special relations with the Commonwealth Caribbean countries it is not seeking to have a relation with any part of the region that would be in any way analogous to that which Britain had with those territories. Canadians are thinking rather of close practical cooperation for mutual benefit in various fields.¹⁹ The same theme was repeated by Mr. Martin in his speech at Michigan State University, East Lansing, on 25 February 1967, when he mentioned Canada's "developing special relations with the countries of the Commonwealth Caribbean."²⁰

Thus it is apparent that Canadian participation in inter-American affairs has been channeled in three main ways: 1) direct relations with each of the Latin American countries and participation in inter-American agencies, 2) relations with the United States, and 3) relations with Commonwealth Caribbean countries.

WHAT would Canadian membership in the Organization of American States mean? The purposes of OAS as stated in the Bogotá Charter of 1948 and confirmed in the Preamble to the Protocol of Amendment signed at Buenos Aires on 27 February 1967 are: 1) to achieve an order of peace and justice, 2) to promote solidarity among the American states, 3) to strengthen their collaboration, and 4) to defend their sovereignty, their territorial integrity, and their independence.

This Preamble reiterated what the Second Special Inter-American Conference, held in Rio de Janeiro in 1965, had declared: that it was essential 1) to forge a new dynamism for the inter-American system and 2) imperative to modify the working structure of the OAS, as well as 3) to establish in the charter new objectives and standards for the promotion of the economic, social, and cultural development of the peoples of the hemisphere and 4) to speed up the process of economic integration. Finally, this Preamble stated that it is essential to reaffirm the determination of the American states to combine their efforts

in a spirit of solidarity in the permanent task of achieving the general conditions of well-being that will ensure a life of dignity and freedom to their peoples.²¹

It seems safe to say that the first aim, "to achieve an order of peace and justice," has been generally reached in Canada. As to defence, Canada is linked by defence agreements with the United States and, in a multi-lateral way, with the NATO countries. Whether membership in the OAS would improve Canada's defence potential is debatable. As to the promotion of solidarity among the American states and strengthening of their collaboration, it is possible that Canada, if within the OAS, could contribute more to these aims than it does at present, although its attitudes could then be interpreted as more those of an interested party than they are while it remains outside the OAS voting system.

Among the arguments against Canadian membership is the contention that the Commonwealth connection weighs against full Canadian participation in OAS.²² This argument seems to be both unconvincing in principle and obsolete in fact due to the changing character of the Commonwealth. The recent application by the government of the United Kingdom to join the European Common Market shows that the Mother Country itself finds it opportune to enter into a regional organization that is much more closely knit than that of the American states. Furthermore, the United Kingdom is a member of the European regional organization, Council of Europe. As to the Western Hemisphere, one of the Caribbean Commonwealth countries, namely Trinidad and Tobago, has been recently admitted to OAS. It is possible that other Commonwealth countries of this region will follow the example of Trinidad and Tobago. While the entry of Caribbean Commonwealth countries (and possibly Guyana and British Honduras, although with the latter there is the problem of Guatemalan and Mexican territorial claims) would not significantly change the voting pattern within OAS, even with Canada's membership, a situation would nevertheless be created wherein the United States would no longer be the only English-speaking

OAS member. Also in the long run French-speaking Quebec could broaden its cultural aid to the only French-language OAS member, Haiti.

It is true that Canada, as a member of OAS, would find itself in an awkward position on many issues, having to take sides with or against the United States.

The moral value of this argument is at least doubtful. As to its practical importance, with the development of international interdependence a clear position on international problems is in any case unavoidable. Canada already has to take sides within the United Nations. Why should it shy away from doing so in OAS? A more weighty argument is that countries outside a region of serious problems have frequently been able to play a more constructive role in helping to resolve problems than those which are closer and more immediately involved.²³ Here once again it is submitted that, even if Canada remained outside OAS, the effects of this artificial isolation would gradually disappear through growing Canadian participation in inter-American activities. The lack of knowledge among Canadians about Latin America is still great,²⁴ but the situation has now improved considerably, partly through commercial relations and partly through cultural relations and tourism, the latter facilitated by rapid air connections.

It has also been said that membership in the OAS will involve substantial costs for Canada; that Canada, with its limited resources, will find itself too heavily burdened as a consequence of membership in OAS; and that Canada should be expanding its foreign aid and other foreign commitments in other directions more in line with its historic affiliations and international interests (e.g., via the Colombo plan).²⁵ It is true that Canada, notwithstanding its high standard of living, is still a capital-importing country, although it does export capital as well. While it is difficult to estimate the cost of Canadian membership in OAS, possibly it would not exceed substantially the present direct and indirect outflow of Canadian capital to Latin America and Commonwealth Caribbean countries. Canada could always continue its traditional economic rela-

tions with the latter area, which probably will become a part of the OAS.

economic factors

Whatever the cost of Canadian membership in the OAS, it could be considered a sound investment. The Latin American Free Trade Association (LAFTA), created in 1960 and comprising all the larger South American states plus Mexico, will be transformed into a European-type common market. The April 1967 meeting of presidents at Punta del Este estimated that this common market will be fully functioning by 1985 at the latest. At that time it is expected that it will involve 300 million inhabitants.

Although it is difficult to foresee offhand what role Canada could play in this organization, it seems of the greatest importance to study the question. It is also important not to lose time, as did the United Kingdom when it hesitated to join the European Common Market and in consequence has met with difficulties. Canadian membership in the OAS and possibly Canadian associate participation in the Latin American Common Market (to be called perhaps Inter-American Common Market) could in the future prove advantageous for the OAS, for Canada, and for the United States. Without it, Canada could run the risk of becoming a complete satellite of the United States, which would not be advisable for either Canada or the United States.

It is true that the Protocol of Buenos Aires (article 40) views the establishment of a Latin American common market, not an inter-American market. It does, however, exhort all the American states to make individual and united efforts to bring about the reduction or elimination of tariff and nontariff import barriers that affect the exports of members of the OAS; to maintain continuity in economic and social development by means of improved conditions for trade in basic commodities through international agreements, orderly marketing procedures that avoid the disruption of markets, and other measures designed to promote the expansion of markets; and to obtain dependable incomes for pro-

ducers, adequate and dependable supplies for consumers, and stable prices that are both remunerative to producers and fair to consumers. It calls for improved international financial cooperation; for the adoption of other means for lessening the adverse impact of sharp fluctuations in export earnings experienced by the countries exporting basic commodities; and for diversification of export and expansion of export opportunities for manufactured and semimanufactured products from the developing countries by promoting and strengthening national and multinational institutions and arrangements established for these purposes. (article 37)

While it is impossible to cover here the entire treatment of economic matters as it is presented in the Protocol of Buenos Aires, where it has been expanded from the original two short articles to fourteen articles (numbers 29 to 42), even this brief coverage indicates the importance of economic problems to the members of the OAS. One need not stress the importance of this new inter-American trend for Canada, a trading nation that exports approximately one-fourth of its gross national product.²⁶ Some of these exports are within the category of basic commodities, like wheat, and it is an open question whether present main purchasers of Canadian wheat (Communist China, the U.S.S.R., and the East European countries) will remain permanent customers when they develop their own agriculture.

Canada, a highly developed country with a high standard of living and a well-established democracy, is a middle power and a relatively sparsely populated one, still importing both human power and capital. Such a subcontinental state within the OAS would constitute a middle American power, possibly of a similar category of importance as the huge and still developing Brazil, thus adding to the stability of OAS, where the disparity of power between the United States and Latin American countries remains at present striking. Canada, a nation friendly both toward its powerful English-speaking neighbour, the United States, and toward Latin American states, could develop within the OAS the same

moderate policy that it has followed in the United Nations and elsewhere. As Prime Minister Pearson said last year, Canada must remain an international nation, both at home and in the world: cosmopolitan, dynamic, outward-looking, up-to-date, looking ahead.²⁷ Such a goal cannot be attained by avoiding the hemispheric organization of states.

the OAS charter

A brief review of the charter of the OAS as amended on 27 February 1967 by the Protocol of Buenos Aires may throw additional light on the possible Canadian membership in the OAS. In accordance with Article XXVI, the Protocol will become effective among the ratifying states when two-thirds of the 21 states signatory to the charter have deposited their instruments of ratification. It will become effective with respect to the remaining 7 states in the order in which they deposit their instruments of ratification. The original charter, which was signed at the Ninth International Conference of American States at Bogotá on 30 April 1948, became effective 13 December 1951, when the 14th ratification was deposited by Colombia. It was registered with the General Secretariat of the United Nations on 14 January 1952. The OAS charter does not impair the rights and obligations of the member states under the charter of the United Nations (article 137). The essential purposes of the OAS remain unchanged: a) to strengthen the peace and security of the continent; b) to prevent possible causes of difficulties and to ensure the pacific settlement of disputes that may arise among the member states; c) to provide for common action on the part of those states in the event of aggression; d) to seek the solution of political, juridical, and economic problems that may arise among them; and e) to promote, by cooperative action, their economic, social, and cultural development. (article 2)

The problem of security is again covered among the "principles," where it is stated that an act of aggression against one American state is an act of aggression against all the other American states (article 3f). Further-

more, Chapter VI on collective security amplifies this principle by stating that every act of aggression against the territorial integrity or inviolability or against the sovereignty or political independence of an American state shall be considered an act of aggression against the other American states (article 27). While the next article deals not only with an armed attack but also with an act of aggression that is not an armed attack, an extracontinental conflict, a conflict between two or more American states, and any other fact or situation that might endanger the peace of America, it does not provide for measures of defence. This article (number 28) mentions only that in such cases the American states shall apply the measures and procedures *established in the special treaties* on the subject. This means that Canada's obligations in the event of any aggression would not be increased by its membership in the OAS. Nevertheless the OAS could possibly vote on certain related measures. The OAS does not provide for a veto power like that in the Security Council of the United Nations, the OAS rule being that of a majority, or in several important cases a majority of two-thirds of the member states. Thus Canada could be outvoted in the OAS. This is also true in the United Nations, however, where Canada does not hold a power of veto.

The Protocol of Buenos Aires greatly expanded the chapters on social and cultural standards. While Canadians can contribute to the development in this field, it is also true that the rich Latin American cultural heritage and literature represent an interesting potential for Canadian students and scholars.

Extensive changes in part two of the charter of the OAS tend to make the organization more efficient by developing existing organs of the OAS and by providing for the permanence of their work or the increased frequency of their meetings. Thus the OAS hopes to accomplish its purposes by these means: a) the General Assembly to convene annually instead of every five years as did its predecessor, the Inter-American Conference; b) the Meeting of Consultation of Ministers of Foreign Affairs; c) the Permanent Council of the OAS, the Inter-American Economic and

Social Council, the Inter-American Council for Education, Science, and Culture; d) the Inter-American Juridical Committee; e) the Inter-American Commission on Human Rights; f) the General Secretariat, replacing the Pan American Union; g) the Specialized Conferences, being intergovernmental meetings to deal with special technical matters or to develop specific aspects of inter-American cooperation; h) the Specialized Organizations, being intergovernmental organizations established by multilateral agreements and having specific functions with respect to technical matters of common interest to American states.

Among the "transitory provisions," article 149 provides that the Inter-American Committee on the Alliance for Progress shall act as the permanent executive committee of the Inter-American Economic and Social Council as long as the Alliance is in operation.

The new structure of the Organization of American States, more detailed and providing for important economic integration, supported by either permanent activities or by more frequent meeting of its organs, may prove to be a more efficient regional organization of states than it was before the amendments of Buenos Aires. Such an organization, not hampered by veto of great powers, could be a vital factor for harmonious development of the Western Hemisphere and also a valuable uniting force within the United Nations.

CANADA is already cooperating closely with the United States and is linked traditionally with Commonwealth Caribbean countries, one of which is already a member of OAS and others of which may be expected to join. Canada is also extending aid in conjunction with Inter-American Development Bank and participates in three inter-American agencies. In addition Canada has friendly relations with all American states, develops its trade with this region, and has traditional links with Latin America through the efforts of Canadian religious groups, either by way of material aid or by the social, educational, and religious activities of Canadians in Latin American countries.

It seems, therefore, that the pros and cons of Canadian membership in OAS will find an answer in the gradual interdependence of Canada, not only in its relations with the United States but in its relations with most of the American countries.

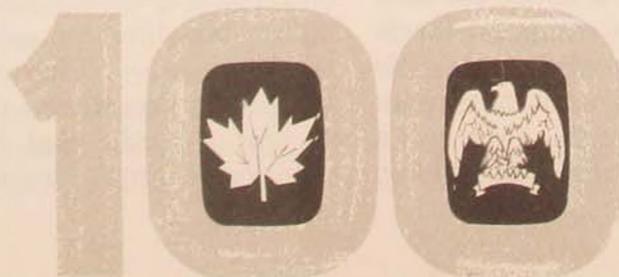
Canada's formal membership in the OAS would not change the present situation very much. Is such a step in the interests of both the Organization of American States and Can-

ada? It may not be of decisive importance, but on the whole such a step would appear to be in the interest of all concerned. As the Canadian Secretary of State for External Affairs said recently, there is "no doubt whatsoever that membership in the OAS is part of the ultimate destiny of Canada as a country of the Western Hemisphere."²⁸

Manchester, England

Notes

1. John D. Harbron, *Canada and the Organization of American States* (1963), Canadian American Committee sponsored by National Planning Association (U.S.A.) and Private Planning Association of Canada, 1963, p. 11.
2. *Ibid.*
3. *Ibid.*, p. 18. See also E. Lieuwen, *U.S. Policy in Latin America*, 1965, p. 10.
4. Harbron, p. 18.
5. Speech by the Acting Prime Minister and Secretary of State for External Affairs, the Honourable Paul Martin, at the opening of the Eighth American Regional Conference of the International Labour Organization, Ottawa, 12 September 1966, Statements and Speeches, Information Division, Department of External Affairs, Ottawa, No. 66/37, p. 6. ("Statements and Speeches . . ." hereafter cited as S&S.)
6. A speech by Senator John J. Connolly to the Sixth Inter-American Conference of Business Executives in Lima, Peru, on 9 November 1964, S&S No. 64/34, p. 4.
7. A speech by the Secretary of State for External Affairs, the Honourable Paul Martin, to the Second Annual Banff Conference on World Development, 24 August 1964, S&S, No. 64/16, p. 4.
8. *Ibid.*, p. 5.
9. The Canadian funds in the form of direct loans amounted to U.S. \$27.8 million, and in the form of loan participation and parallel financing arrangements amounted to U.S. \$13.95 million. Inter-American Development Bank, *Social Progress Trust Fund Sixth Annual Report*, 1966, p. 391.
10. The Canada-United States Permanent Board of Defence, Reference Papers, Information Division, Department of External Affairs, Ottawa, No. 116, August 1965, p. 2. (Hereafter cited as PBDRP.)
11. *Ibid.*, pp. 4 and 5. See also John Gellner, "Canada in NATO and NORAD," *Air University Review*, March-April 1967, pp. 22-37. W. L. Morton, "The Fundamentals of Canadian Defence and Foreign Policy," *Air University Review*, January-February 1967, pp. 5-14.
12. PBDRP, p. 5.
13. *Ibid.*
14. "Aspects of Canada and United States Foreign Policies," a speech by the Honourable Paul Martin, Secretary of State for External Affairs, Michigan State University, East Lansing, 25 February 1967, S&S, No. 67/5, p. 2.
15. Address by the Honourable Paul Martin, Secretary of State for External Affairs, at a Dinner of the Mid-western Regional Conference of Attorneys General in Detroit, Michigan, 7 December 1965, S&S, No. 65/30, p. 2.
16. "Canada's Trade with the Commonwealth Caribbean," a speech by the Minister of Trade and Commerce, Mr. Robert H. Winters, to the Halifax, Nova Scotia, Board of Trade, 27 February 1967, S&S, No. 67/6, p. 1.
17. Canadian External Aid, Reference Papers, Information Division, Department of External Affairs, Ottawa, No. 86 (revised September 1966).
18. Winters, p. 2.
19. "Canada and the Commonwealth Countries of the Caribbean," address by the Secretary of State for External Affairs, the Honourable Paul Martin, to the Toronto Branch of the Canadian Institute of International Affairs, 24 May 1966, p. 3.
20. S&S, No. 67/5, p. 7.
21. OAS Doc. 11 (English), Rev. 5, 27 February 1967.
22. Harbron, p. 22.
23. *Ibid.*, p. 22. See also John W. Holmes, "Canada's Role in the United Nations," *Air University Review*, May-June 1967, p. 20.
24. Harbron, p. 25.
25. *Ibid.*, p. 22.
26. See Muriel T. Baron in *Waldmarck Encyclopedia of Nations: Americas*, 1965, p. 57: "Canada ranks fifth in world trade, follows the United States, West Germany, the United Kingdom and France . . . export of goods and services have been close to 20% of gross national expenditure while imports have been even higher . . . In 1962 total trade (exports and imports together) were valued at over Cdn \$12.6 billion, an increase of 8% over 1961."
27. "The Identity of Canada in North America," an address by the Right Honourable Lester B. Pearson, Prime Minister of Canada, to the American Society of Newspaper Editors, Montreal, 19 May 1966, S&S, No. 66/72, p. 6.
28. "Canada and Latin America," a speech by the Honourable Paul Martin, Secretary of State for External Affairs, at the Canadian Inter-American Association dinner, Ottawa, 31 May 1967, S&S, No. 67/21, p. 2.



depended on a man's ability to create success for himself and his family by making the right decisions. The drive for security was self-generated and could be self-accomplished, by a man's own actions. The amount of security achieved was directly proportional to the amount of successful effort expended. Generally speaking, the security of success, in whatever terms evaluated, was directly attributable to the ability to make the right decisions. Accordingly, there was a premium on decision-making.

What was true in the industrial environment was true in the military also. In the squad, the platoon, the company, decision-making was the key to successful military action and was easily recognizable, leading to promotion and the accompanying economic and social rewards. This situation still exists, although to a lesser degree, in some elements of the military—the ground forces fighting platoon-size actions in Vietnam, a small, remote radio monitor site or radar station, a detached PT boat on patrol, perhaps.

For the most part, however, times have changed. In terms of the number of people involved, the dollars expended, the impact on the nation's economic and military posture, it is "big business" that is in the forefront—in industry, in government (civilian and military), in the service field (labor unions, educational institutions, etc.).

In the impersonal atmosphere of the large military headquarters and in the large command posts managing extensive automated systems, it has become possible to avoid the harsh glare of public notice by avoiding the making of significant decisions. The size of the military structure and the growth of a promotion system that ensures consideration based on the accumulation of sufficient years of service has put a premium on anonymity. Despite the popular pastime of bemoaning the low promotion rates, the odds on being promoted simply by staying out of trouble for a sufficiently long period of time remain fairly respectable, at least up to the grade of lieutenant colonel.

As organizations grew in size and more impersonal promotion systems became necessary, there has been a profound change in the

approach to personal security. The federal social security package of 1935 may well be considered the first step in this approach. Company-sponsored benefits, union programs, and an amazing growth in personal savings supplemented the government measures. The total result has been to ensure to a large proportion of the population at least minimal long-range security—but a security embedded in the past and no longer totally dependent on the continuation by the individual of progressive and successful decision-making.

The military has not been exempt from this socioeconomic trend. In fact it has often been in the lead in establishing welfare benefits: for example, an excellent and noncontributory retirement plan, full coverage under social security, termination pay for those officers found not suitable for continued retention. The occasional reduction in force, White Charger, "up-or-out" concepts have generally been short-lived, doomed by rapidly changing world politics and the lack of a stable, long-range budgetary plan. Despite the absolute effect on those people personally involved, their impact on the force as a whole, in terms of relative numbers, has not been significant. In order to ensure the security of retention and probable promotion, it has usually been more advantageous for the individual officer to avoid notice of any kind, favorable or unfavorable, than to stand out as a progressive thinker.

Industry and the military alike have used this growing preoccupation with long-range security to improve employee recruitment and retention. Virtually every recruiting advertisement describes fringe benefits such as retirement, medical care, relocation allowances, educational programs (aimed at guaranteeing still more security), etc. Rarely is the opportunity for increased responsibility, for the stimulation of decision-making, mentioned as an inducement. Within the organization a "father image" is fostered to develop a feeling of identification in the form of a "family" relationship. Speaking at Michigan State University in 1958, William Wilson, of the Kimberly-Clark corporation, said:

A paternalistic corporate attitude . . . is directed toward reducing the insecurity of people and

thus reducing their anxieties. But anxiety is the very stuff from which the best creative effort springs! . . . Insecurity is one of the many ways of triggering the necessary anxiety.

Although writing in an entirely different context, the noted author I. A. R. Wylie came to virtually the same conclusion:

I believe that fear, out in the open, is one of the most valuable assets—a sort of key to our reserves, a means to call into action our latent capabilities. We do not, therefore, need to fear fear . . . we need only handle it rightly, knowing that it can reveal our strength.

Contrast this concept with the statement, “The only thing we need fear is fear itself,” of President Franklin D. Roosevelt, under whose leadership the economic theories of social security first flowered in this country.

The expansion of personal security places a high premium on stability—stability of the society, stability of the total economy, and stability within the corporate or economic structure. (Aren't we hoping, in fact, that this same popular expansion of security in the U.S.S.R., with its concurrent need for continuing national stability, will be the key to a reduction in the tensions between us?) This need for stability, coupled with a “Don't rock the boat” approach by the paternalistic corporation, has given rise to what William H. Whyte, Jr., has called “the organization man.” In his book of that title, Mr. Whyte develops at length the theme of the “typical” manager who fits his thinking into the company mold.

Since Mr. Whyte first coined the term, much has been written about the organization man. In a provocative article titled “The Manager—Roadblock to Change?” (*The Management Review*, April 1961), Ben Miller explores the problem of “. . . the ‘organization man’ kind of unquestioning acceptance of everything that comes from on high.”

Paul M. Dauten, Jr., in “Current Issues and Emerging Concepts in Management” in 1962 said: “Many modern-day employees work in an environment in which they are expected to be passive and dependent. . . . They have neither much opportunity nor much incentive to be creative. . . .”

This lack of opportunity and incentive exists to a considerable extent as a by-product of size and is found in the military as well as in the industrial segment. The layering of management levels makes it difficult for the young officer to obtain a hearing on a level at which major or radical suggestions can be approved. The stagnation of progressive decision-making is most prevalent at what is known in industry as “middle management,” which I consider roughly comparable to the major and lieutenant colonel grades.

As a rule, resistance to change is most firmly embedded in the security consciousness of the man who has established a reasonably advanced position. The junior officer has not yet become as firmly entrenched in the existing hierarchy and ordinarily has not yet committed himself completely to a military career. And because of the pyramidal structure of management and the consequent exposure as one approaches the apex, many colonels and most general officers are more ready to accept radical suggestions if they show promise of significant value.

It is my contention, then, that military management in general and the middle grades in particular have become embedded in a system which discourages creative thinking and puts a premium on conformity. Management attempts to secure the continuity of its own position by pursuing a policy of stagnation, to insure to itself the security already earned, a security which is endangered by change and therefore threatened by decisions that would promote change. Typical of this approach is the practice of “second-guessing the boss,” i.e., providing analyses and recommendations deemed to be “acceptable” rather than representative of one's own honest but perhaps controversial opinions.

Security and the desire to preserve it stifle creative decision-making in another way: through fear of making a mistake. Dr. Harry Levinson, writing in the September-October 1962 issue of the *Harvard Business Review*, described the problem:

The general results obtained are never good enough in many companies, leading to more pressure from superiors for improvement,

rather than help toward growth. This pressure is often viewed as punishment for mistakes, as a result of which the subordinate learns not to make mistakes by not demonstrating initiative.

The fear of making mistakes, together with the corollary desire to avoid having to say "I don't know" to a superior, has another unfortunate result: the proliferation of reporting requirements levied on subordinates. Reports are requested and data compiled, not to meet a true management need for the information but only to insure an appearance of omniscience by being able to answer any question that might be asked, regardless of its probability, frequency, or importance.

I view the trend toward management by committee (in industry) and by the frequent use of conferences (in the military) as a further manifestation of the aversion to decision-making due to a fear of jeopardizing security. There are advantages to group activity: the exchange of information and the presentation of ideas can stimulate the creative thinking of the participants. At the same time, group or conference action when used in a decision-making role serves as a refuge for the security-conscious manager who seeks to avoid the responsibility for his decisions. Group decision-making requires compromise, and that compromise must be found within the limits of shared knowledge. The inevitable result is mediocrity. Although the probability of major error is admittedly reduced, so is the chance for truly creative action.

Paradoxically, the very search for security itself has led us to the most basic insecurity of all—the fear of losing that which we already have. The search for security can stimulate creative thinking and progressive decision-making when the acquisition of the security we desire results from valid positive action. When our security depends instead on our

ability to maintain the existing state of affairs, then creativity is stifled and much of our energy is dissipated in the search for reasons to avoid change and to perpetuate stagnation or at best creeping modification.

Obviously the present emphasis on personal security is not a temporary phenomenon but must be accepted as a permanent and basic fact of our economic life, both in and out of the military. Nor would I suggest or want a return to the seriously dislocated economic structure of years ago. We must, however, find a path out of the forest of mediocrity in which we find ourselves. Complacency and conformity must be forced to retreat in favor of creative thought and action. Junior officers must be encouraged to exercise initiative and imagination, and the middle grades must be prepared to accept and implement valid recommendations or pass them on to top management with active support. We must develop at all levels a concept of managerial growth which will permit us to tolerate and discount the mistakes that will inevitably accompany positive decision-making, in preference to an error-free philosophy that slams the door on creative thinking. Our promotion system must place greater stress on aggressive and creative management, with a corresponding reduction in reward for those who are just "putting in time."

Otherwise we are doomed to slow strangulation in the quicksands of complacency and conservative mediocrity, managing today's technology with yesterday's methods, bogged down in the constantly increasing amounts of paper our automated systems are spewing out, and searching in vain for the sparks of creativity that have long since been smothered in the press of anonymous bodies searching for security.

Campion AFS, Alaska

AIRMAN RETENTION— MANAGEMENT'S NEW CHALLENGE

COLONEL PETER J. HOKE

WITH its first-term re-enlistment rates dropping from 25.5 percent overall in FY 1965 to 19 percent in FY 1966¹ and apparently heading further downward in FY 1967, the Air Force is in need of some serious introspection. Among other actions, the situation calls for a few questions to ourselves about the quality of our management at the working group level. Are we finding ways to utilize the growing body of knowledge about what motivates people to greater production, to a desire to remain on board?

A prominent management treatise, Douglas McGregor's *The Human Side of Enterprise*,² may provide help in resolving at least some of our serious first-term losses. The reference is to McGregor's treatment of Maslow's theory of man's need levels, arranged in a hierarchy of importance.

According to McGregor, man will always satisfy certain levels of need before he concerns himself with higher levels. He seeks food ahead of shelter. Shelter ahead of friends. Friends ahead of status. But once a need level is satisfied, he must be appealed to at a higher level of need if he is to be motivated positively. A satisfied need is not an important motivator.

Our thesis here is that if the Air Force can provide motivations at the necessary need levels, the airman will be less likely to seek motivations elsewhere. Consider these five need levels in terms of the young airman:

- (1) Physiological needs
- (2) Safety/security needs
- (3) Social needs
- (4) Ego needs:
 - (a) As he perceives how others see him
 - (b) As he sees himself
- (5) Self-fulfillment needs.

Air Force retention efforts may be directed too much at the partially satisfied needs at levels one, two, and three.³ Lines are not always sharp, but food, clothing, salary, hous-

ing, entertainment, recreation, travel, and even training fall largely in the first three categories. Training, for example, may be thought of more as a matter of securing the future than satisfying the inner man.

The fifth and highest-level need, self-fulfillment, is not a problem for first-termers. They will rarely satisfy all need levels below number five. If they did, we would have few re-enlistment problems. This leaves the fourth level, ego. McGregor says that these are the needs of greatest significance to management and to man himself.

What is our problem? We must act more aggressively to accommodate the needs of the "inner man." The most important key is *his immediate working group and the satisfactions he gains there*.⁴

In any work situation where the following questions can be answered with an unequivocal yes, we can expect more re-enlistments:

- Does the airman think that *the other workers in his shop or office* see him as an essential part of the team?
- Does the airman believe that he is an essential part of the team?
- Does the airman generally understand the larger effort and see the activities of his team as essential to it?
- Does the airman see compliance with his team's objectives as helping to achieve his own objectives?

To achieve such positive orientation and satisfaction (i.e., topnotch management) throughout the Air Force, its managers, particularly at the working group level, must concentrate on the pulse and cohesiveness of the human organization. The problem is primarily one of instilling the sense-of-the-matter in all commanders and supervisors. This is a vast educational task and must not be oversimplified. But specific actions can help. Here are just a few suggestions that might move us

toward higher re-enlistment rates by appealing to the inner man.⁵

(a) More visits and inspections by senior commander and senior functional chief, to include coverage of the support and menial activities as well as the hard-core ones. A commander's best possible "feel" for the human situation and its environment in his command cannot always be obtained from others.⁶

(b) Selective use of qualified individuals, possibly from among chaplains and IC's, to report on the status and sensitivities of the so-called informal organization.

(c) Provision of an easier way, a guaranteed reception, a warmer atmosphere for airmen who seek counseling or want to "unload." Going to the IC smacks of the griper; going to the chaplain smacks of the weakling. We might consider the counselor system used in many high schools, as some of them are apparently filling similar needs very well. (This suggestion correlates directly with (b), since a counselor will be a key source of such information. Perhaps the counseling problem is not so much one of creating a new post as of redirecting present counseling capabilities toward understanding and using the newer research to the advantage of management.)

(d) Use of orientation programs and tests to insure that each member of a group or work center knows how his group's work relates to the work of groups above and around him and how the larger organization fits into its environment. (When such briefings are hard to develop or when they ring false, look for other troubles!)

(e) The achievement of a better understanding by supervisors that "busy work," conjured up as a camouflage for idleness, as well

as idleness itself, depresses group ego. Airmen are not fooled. There must be a seriously supported policy of minimum essential yet adequate manning.

(f) And an obvious last suggestion: increased supervisory training in newer concepts of organization and management.

None of the suggestions are intended to de-emphasize the crucial importance of increased pay and other benefits, which must continue to be pursued vigorously. The suggestions hopefully would make these factors less persuasive in the career decision of the first-termer.

A wise, perceptive, and altruistic manager can probably achieve the desired working group conditions without outside help. Any manager with the inclination and aptitude should be able to acquire, through study and application, the skills necessary to achieve these conditions. However, this is a total problem. While isolated pockets of modern management in action will exist in the Air Force, this will not meet our needs. This kind of management must achieve name-of-the-game status throughout the whole if it is to link up and maintain its gains. "Future managers," according to Dr. Ferraro, "will need a much greater understanding of human behavior and human motivation in order to handle effectively the many human problems that will confront them."⁷

The Air Force must require of all aspirants to leadership that they practice a brand of management that actively seeks to meet the ego needs of the inner man. That is the way to increase productivity and one sure way to help keep our airmen re-enlisting.

Hq Air Defense Command

Notes

1. *Air Force Times*, 12 October 1966, p. 2.

2. New York: McGraw-Hill, 1960.

3. This statement tends to be supported for officers and for industry by recent research, including the Air Force Officer Motivation Study, Project "New View." These groups were at higher income levels and may not be comparable to first-term airmen. However, there is some opinion that similar studies of first-termers would produce similar findings.

4. The importance to management of working group cohesion and supportiveness is a primary theme of Rensis Likert in his widely read book, *New Patterns of Management* (New York: McGraw-Hill, 1961).

5. These suggestions are opinions of the writer believed to represent practical steps toward benefiting from modern management research. They do not necessarily represent opinions of the eminent experts quoted herein.

6. IBM's Thomas J. Watson, Jr., says: "There is no suitable substitute for a great amount of travel on the part of the president of the company. He must constantly visit offices and factories and clearly and forcefully announce what he expects." H. B. Maynard (ed.), *Top Management Handbook* (New York: McGraw-Hill, 1960), p. 515.

7. Dr. Eugene T. Ferraro, Deputy Under Secretary of the Air Force for Manpower, as quoted in an interview in *The Airman*, June 1967, p. 18.

THE ROLE OF THE ARMY AIR ARM IN LATIN AMERICA, 1922-1931

DR. WESLEY PHILLIPS NEWTON



PERSONNEL OF THE CENTRAL AMERICAN FLIGHT

Capt. Smith Lieut. Beery Lieut. Wainer Major Walsh Lieut. Miller Lieut. Albrook
Tech. Sgt. Crevier Tech. Sgt. Roesser

IN the early twentieth century the United States became increasingly concerned about the nature and degree of extra-hemispheric attention to Latin America. With the opening of the Panama Canal in 1914, the United States had added reason for concern about such outside interest. It sometimes implied a threat to the Canal, besides being a part of the economic and, beginning in the 1920s, ideological competition among the major powers. Following World War I the threat appeared to grow because of the progressive development of the airplane. The airplane also provided a stimulant to the economic aspect of the competition.¹ It is not surprising, then, that the United States Army Air Service^o played an important role in the government's reaction to the threat and competition.

General defense of an interocean canal was a concern of the United States government before, during, and after the actual acquisition of the Panama Canal Zone in 1903. But defense of the Canal against a threat from the sky was not an immediate cause for anxiety, for aviation as a military weapon or transportation boon was slow to develop after the first manned heavier-than-air flight in 1903. In April 1913, however, a U.S. civilian aviator, Robert Fowler, made the first flight over the Panama Canal. His flight generated enough alarm in governmental circles to bring about the initial regulatory measure pertaining to aviation and the Canal, an executive order of 7 August 1913 prohibiting unauthorized flights over the Canal Zone. During World War I various other Presidential orders broadened the original one. After the war the government allotted an Air Service observation group and a small number of Navy planes to the Canal Zone.² These and anti-aircraft batteries were to provide an air defense that probably was sufficient for any practical assault that could have been mounted at the time.

By 1922 a few Army airmen as well as a few diplomats and politicians saw the need for additional defense for the Canal because of certain European commercial endeavors in

Latin America, mainly originating after World War I: the sale of civil and military aircraft and the establishment of flying schools and rudimentary airlines in an area that needed air transportation but had little aviation of its own. In the first few years after the war the United States had been little interested in this competition for aviation sales and service. In December 1922, however, the United States Minister to Guatemala, Arthur H. Geissler, sounded an alarm to the State Department about European aviation activities in Central America. He coupled his warning with suggestions that the United States establish its own airline services in Central America and that military and naval planes from the Canal Zone be sent on missions of courtesy to Central America.³

Motivated by the warning, Secretary of War John W. Weeks soon wrote Secretary of State Charles Evans Hughes that there was a genuine threat to the Canal from commercial planes potentially convertible to bombers. He stated his opposition to any but United States control of airline service in Central America. The Chief of the Army Air Service, Major General Mason M. Patrick, had assured him, Weeks informed Hughes, of the availability of private U.S. capital and personnel if such an airline proved feasible. Concerning Geissler's suggestion that planes be used in diplomacy, Weeks reported to the State Department that five Air Service planes were available in the Canal Zone for missions of courtesy to Central America. He pointed out that the logical time for such flights would be between November 1923 and April 1924, when the weather would tend to be favorable.⁴

Washington had thus decided to use the Air Service as a diplomatic instrument to counteract the alleged threat to the Canal. It did not take an entirely new orientation for the Air Service to assume this duty. Since the war various individuals in that service had been interested in Latin America as a logical area for the expansion of United States aviation. They had advocated official air missions or displays of U.S. aviation products at expositions attended by Latin Americans. On the other hand the Air Service had at times failed

^oThe Air Service was renamed Air Corps in 1926, but the title appropriate to the time will be used in this study.

to take advantage of such opportunities to promote U.S. aviation.⁵

What kind of environment were foreigners to encounter in Latin America following World War I? The influence of the industrial revolution, given impetus by World War I, was at work in parts of Latin America. The area had over a century's history of attracting foreign investments, necessary for its development. A dubious effect of foreign investment was that it sometimes served as one prop for ruling oligarchies and *caudillos*. Many countries in the 1920s continued to welcome foreign loans, private and governmental, and various other forms of investment, while a few, like Mexico, were taking steps to limit investment. The Mexican attitude had contributed to a time of tension with the United States.

Certain past U.S. policies, like the Roosevelt corollary to the Monroe Doctrine and Dollar Diplomacy, had provoked increasing Latin American ill will toward the northern neighbor. The continued occupation of Haiti and broadened involvement in Nicaragua beginning late in 1926 were other examples. During the 1920s these policies underwent change, however, as evidenced by the Central American Flight in 1924, the Pan American Flight in 1926-27 (about which more later), and as climaxed by the Good-Neighbor Policy of the 1930s.

It was in a milieu of some tension, then, that the Air Service prepared to involve itself in a Latin American diplomatic mission. Flights of planes from the Canal Zone to surrounding Latin American areas for official purposes were not new in 1923. Navy planes from the air station at Coco Solo, C.Z., had previously flown to points in South America on courtesy visits. These flights had aroused enthusiasm among South American businessmen for aviation. The proposed Army venture, however, had wider implications. In a letter of 17 July 1923, Weeks outlined to Hughes the purposes of the projected flight to Central America: (1) sowing of good will, (2) charting of air routes and gathering of data on available airfields, (3) serving as forerunner of a United States airmail service from New

Orleans to Central America, and (4) aiding the United States aviation industry to establish a market in Central America. Samuel S. Bradley, post-World War I figure in the United States aviation industry, recognized early in the era that "only through the development of commercial aviation will we be able to maintain a sufficient aeronautical establishment to meet the needs of national security."⁶ In seeking to promote overseas sales of American aviation products by the Central American Flight, the Air Service gave evidence that it had come to appreciate fully the relationship of a healthy industry to preparedness.

In August 1923 the Adjutant General of the United States Army authorized the Commanding General of the Panama Canal Department to send three planes to Central America for visits of courtesy and for charting "such airways in the Central American Republics as would be of value to the respective governments as well as to the Army Air Service in the event of an emergency. . . ." The flyers also were to collect photographic data in support of airways reports. The air route to be surveyed was to run no farther north than "the southern Mexican border."⁷ Although not previously cited as a motive for the flight, the existence of airways for "emergency" use was to become of prime interest to the Army. This motive will be apparent in the subsequent account of Pan American Airways in Central America. Such an airway naturally related to the general theme of protection of the Canal.

As a companion project to the Central American Flight, Secretary Weeks suggested that treaties be sought with Central American countries for the exchange of aviation privileges and for mutual regulations pertaining to airplanes. The Air Service influenced this suggestion: General Patrick had been one of the U.S. delegates to a meeting in Paris in 1919 at which the first major international aviation agreement, the Paris Convention, was written. It was the basis for exchange of aviation privileges between contracting countries but at the same time asserted that a nation had sovereignty over its airspace. The United States had signed but for various reasons had never

ratified the convention. The Air Service believed that expansion of U.S. aviation was limited by the failure to ratify. Individual treaties with Central American countries were to serve in lieu of ratification of the Paris Convention by these countries and the United States. Postmaster General Harry S. New and Commerce Secretary Herbert Hoover favored these treaties, but Secretary of the Navy Edwin Denby presented the objections of the influential Navy General Board to the effect that reciprocal agreements might boomerang against the United States in the long run. Whether or not the Navy attitude was decisive, the treaties never developed. When it was evident they were a dead issue, General Patrick expressed his disappointment. They would, he believed, "afford to our Nationals the requisite assurance of their right to the continuing operation of such aerial transportation lines as they may see fit to establish in these Republics. . . ."⁸

Thus the flight remained the central focus of the project. Hearing of the plans for a flight, the aviation industry's Aeronautical Chamber of Commerce wrote to the Information Division, Army Air Service, requesting that the flight commander disseminate accurate facts about the United States aviation industry and gather data on the market potential in Central America. In reply the Information Division stated that one mission of the flight was to gather information that would aid the United States aviation industry but that it could not go beyond this, for the main objective of the flight was to disseminate good will, and Central American countries would resent an "advertising campaign" carried on by a "purely mercenary expedition. . . ."⁹

Certain events in 1923 and 1924 made the flight seem urgent. In 1923 the Republic of Panama initiated negotiations with the United States for a recognized voice in matters pertaining to aerial navigation in Panama. United States officials in the Canal Zone, including Department Air Officer Major Raycroft Walsh, were cautious in the beginning talks, desiring control of aviation in all of Panama to protect the Canal. These talks soon became part of general United States-Panamanian negotiations toward revising treaty arrangements with

respect to the Canal Zone. At some point in 1923 an airline company in Colombia, *La Sociedad Colombo-Alemana de Transportes Aéreos* (Scadta), commenced to apply pressure on the United States government for landing privileges in the Canal Zone. The Canal Zone was a requisite stopover for a survey flight preliminary to an extension of Scadta's services to the United States via Central America and the Caribbean. Domination of Scadta by German and Austrian interests made its overtures especially unwelcome to United States officialdom. These events were perhaps capped early in 1924 when the chief umpires of the recently completed joint Army-Navy maneuvers in the area stated that air attacks against the Panama Canal would have an excellent chance of success.¹⁰

On 4 February 1924 Major Raycroft Walsh led the Central American Flight of one Martin bomber and two de Havillands on a journey that was in many respects a considerable undertaking. The flyers were not the first in Central America, but they were the first to attempt an elaborate diplomatic flight on a rigid time schedule. The lumbering Martin set an uneven pace that made it difficult to estimate the time of arrival at stops, where expectant crowds and tense officials waited. An ironic contrast existed: the flight carried radio equipment with which it performed plane-to-plane and air-to-ground experiments, but the maps of the navigation officer were not aerial maps, and landing fields were often primitive. In a sense the flyers were hostages to wild terrain, jungle, swamp, volcanoes (the latter "fat and majestic" in the words of the navigation officer), and on one occasion to some of the roughest air many of them had ever encountered.¹¹ Like the *conquistadores* of old, they were explorers with political motives.

In spite of the impediments, the flight proceeded up Panama to Costa Rica, Nicaragua, El Salvador, and Guatemala, avoiding Honduras, where there was revolutionary turmoil. At each stop cordiality and enthusiasm were evident. Through a misunderstanding, the Nicaraguan chief executive was not on hand on the outward journey, but he gave a banquet for the flyers on their return trip and went up for

a joy ride. In Guatemala, President José María Orellana led the crowd in three cheers for the United States, a compliment the aviators did their best to return. Although wearied by flying and the demands of formal and informal receptions, the flyers, according to observers, performed with finesse. Central Americans were particularly impressed by the fact that the visitors managed to arrive at scheduled stops on time. They were undoubtedly impressed by another statistic: the flight returned to the Canal Zone on 24 February 1924 without serious accident or loss of life.¹²

In his official report Walsh pronounced the good-will and route-chartering phases of the mission accomplished. To expedite the successful conclusion of the other two phases—a United States airmail service to Central America and aid to the American aviation industry—he recommended that the United States send official air missions to Central America to offset the influence of Europeans, whose aviation activities in Central America the flight had affirmed, and that the United States government promote an airline, either official or private, in the area. Such a line would have to connect with both the United States and the Canal Zone to be profitable. To boost its aviation industry, the United States needed to establish service and supply facilities in Central America and choose with care a plane for the airmail service.¹³

The Central American Flight was the pioneer effort of major good-will endeavors in Latin America by the Air Service and its successors. It had another and broader importance for the future: the flight was a harbinger of the Good-Neighbor Policy and its subsequent variations, whereby the United States recognized the value of demonstrated good will.¹⁴ It cannot be denied that the flight was also in certain respects a continuation of Dollar Diplomacy, in that it sought to promote American economic investment in Latin America for the advancement of diplomatic aims. But an avowed and sincere objective of Walsh and his men was to spread good will. The success of that objective is revealed in the Central American response to the flight.

The aftermath of the flight, however, was

for those who desired a successful outcome a story of apathy, frustration, and delay. Secretary Weeks' reaction to Walsh's report did not contain the urgency he had expressed earlier. While Weeks advocated some type of action, he stated that no authority existed for air missions to Latin America. It was not until six months after the flight that an interdepartmental conference met in Washington to discuss the matter. Meeting on 20 August 1924, with Walsh representing the War Department, the conference recommended that the Post Office Department investigate the practicality of an airmail route to Central America.¹⁵

Accordingly, the Post Office Department selected postal specialists Vincent C. Burke and Joseph V. Magee to conduct an investigation. They were supplied such pertinent information as the high degree of interest in Central America for an airline and airmail service. The Mexican ambassador indicated that his country might cooperate in the establishment of a route. United States diplomats repeated Walsh's point that a successful airline must connect the United States and Panama. Even then, they warned, the line might not pay at first, but military and economic reasons made the route imperative.¹⁶

In November 1924, after arriving in the Canal Zone, Burke and Magee consulted with various officials, among them Major General William Lassiter, commanding the Panama Canal Department. Lassiter pointed out several benefits to be derived from a Panama-United States airline. He suggested that its facilities would be especially beneficial to the Air Service in wartime. After a short stay in the Canal Zone and a quick visit to Costa Rica, Burke and Magee returned to the United States. In their report they stated that they found from statistics in the Canal Zone, from talks with officials, and from the trip to Costa Rica that an airmail service was not economically feasible and so, from a postal standpoint, not justifiable. They offered the view, however, that the service was probably justified from a strategic standpoint. Thus they did not reject an airline out of hand, but the report set off a chain reaction that brought a halt to progress. Postmaster General New felt that

further action was not "desirable . . . at this time." On the basis of this decision by the Post Office Department, both the State and War Departments decided to terminate their efforts. But it was not without protest from the Air Service. General Patrick felt the investigation was not a true test, for the inspectors had not gone to Guatemala, where sentiment for airline service was the strongest. Defense of the Canal, Patrick warned, made such service urgent. He tried to reopen the matter twice, in January and February 1925, but each time the War Department disapproved.¹⁷

While it was the end of action for a time, it did not end various repercussions. Mr. Geissler in Guatemala continued to warn of the consequences of failure to establish a service to Central America. General William ("Billy") Mitchell, who had advocated an airline to Latin America, accused the War Department of almost criminal negligence in not heeding Patrick's importuning. The matter became an issue at his famous court-martial late in 1925. At one point the defense called on Raycroft Walsh, who reviewed the Central American Flight, his report, General Patrick's concurrence, and the lack of concrete action. Meanwhile, Walsh testified, foreign interests had gained a foothold in Central America, threatening the Panama Canal.¹⁸

Walsh was apparently referring to moves in 1925 by Scadta, the German-and-Austrian-controlled airline company, to extend its operations northward from Colombia into the Caribbean and to the United States. Early in 1925 the company's suave managing director, Dr. Peter Paul von Bauer, visited the United States and wheedled permission for company planes to stop over in the Canal Zone on a flight to survey the proposed extension. A member of the survey flight, he apparently impressed both Air Service personnel and diplomats in Panama when the flight visited the Canal Zone in August 1925. In Central America, Von Bauer and other flight members obtained contracts for service from several governments. After the flight ended in Cuba, Von Bauer continued on to Washington. There in the fall of 1925 he consulted with postal authorities, other executive branch members,

and military and naval officials and also paid a courtesy call on President Calvin Coolidge. The Air Service played a kibitzer's role in the diplomatic game between Washington and Von Bauer, who sought official backing for his plan to extend Scadta's service to the United States and desired an airmail contract.¹⁹

Von Bauer had chartered a company in Delaware to conduct the proposed new service, hoping that the United States government would allow the new company to use Scadta resources and personnel, thus stamping it with a Scadta imprint. At a series of interdepartmental meetings to consider approval of Von Bauer's proposal, the Air Service's influence was a major factor against acceptance. The War Department representative reported on the meetings as they developed to Major Walsh, Patrick's liaison. During the meetings both the Post Office and Commerce Departments' representatives leaned toward Von Bauer. The War Department representative sought to have the conferees advance ways by which the United States, rather than Scadta or some subsidiary in disguise, would have control of air routes in Central America and the Caribbean. In reply to the War Department's request for specific recommendations as to achieving control, Patrick suggested passage of pending legislation authorizing air missions to be sent to Latin America and administrative action to promote an airline to Central America. For the most part the conferees evaded Patrick's suggestions, but neither did they approve Von Bauer's plan. Major Henry H. ("Hap") Arnold also had a part in the Air Service effort against Scadta. Alarmed at the company's proximity to the Canal, he proposed that a purely American company be organized immediately as a counterweight. He and Major Carl Spaatz drew up a prospectus for such a company, which became a government weapon to counter Von Bauer's plan. In addition to War Department and Air Service resistance, opposition by United States business elements helped to thwart Scadta.²⁰

The Air Service was not content to let conferences and interdepartmental decisions determine the fate of an airline to Latin America. During 1925 and on into 1926, it planned

and shaped a new flight, soon known as the Pan American Good Will Flight. Major Herbert A. Dargue was to command it. Early in the planning Dargue listed the objectives for Patrick: the flight's strategic, economic, and diplomatic objectives were to counteract foreign influence potentially harmful to the Canal by showing Latin Americans the superiority of United States equipment over foreign, to demonstrate the feasibility of commercial air service along the airways of Latin America, and to convey good will. Assistant Secretary of War for Aeronautics F. Trubee Davison, in a letter of July 1926 to Secretary of State Frank B. Kellogg, expressed some of the same objectives but placed a slightly different emphasis. Davison stressed the need for "American-controlled airlines throughout Central and South American countries . . . [necessary] from both a commercial and national defense standpoint. . . ." Such airlines would boost the U.S. aviation industry, whose expansion was vital to meet any future "national emergency." These airlines would also "counteract the creation of alien activities in Central and South America. . . ." The Pan American Flight, Davison felt, would supply the necessary data for the establishment of a United States airline. After extensive preparation, the flight started on 22 December 1926, when five Loening amphibians took off from Texas and flew to Mexico.²¹

From the outset the Pan American Flight bucked psychological currents, with which the Central American Flight had not had to contend. Late in 1926 the United States government committed itself intensively in Nicaraguan revolutionary strife. The timing was unfortunate: the flight progressed in a period when Latin Americans voiced their disapproval at what many of them considered unwarranted U.S. interference in Nicaraguan affairs. The flight was a natural target for that disapproval. In the generally unfavorable atmosphere, old antagonisms sharpened, as in Mexico, where the flight's reception was in the main cold. In Colombia, where there were still memories of the loss of Panama, the flyers avoided certain places where violence threatened. But in other countries, like Peru and

Brazil, the reception was friendly, for there relations with the United States were above average for Latin America.²²

In Argentina the flight experienced a climax of bad luck. It had previously suffered delays and damages to planes, but no loss of life. Over Buenos Aires, two of the planes suddenly collided, and, locked together, they spun in. The parachutes of one two-man crew billowed, but the other two flyers, having neglected to wear parachutes, perished. Argentina had been officially friendly, privately unfriendly; but Latin hostility and indifference quickly turned to sympathy. It was sympathy for the dead and their comrades, however, not for the flight itself. The survivors regrouped and finished the tour.²³

In some respects, the flight was a failure bordering on disaster. Dargue's own report belies the flight's success in encouraging good will in much of Latin America. Its delays, accidents, and loss of life did not contribute to a positive image of a United States airline. Yet it did contribute something toward such an enterprise. Some of the airplanes were the first to cover the principal airways of Latin America in one journey, evincing further the airplane's potential for transportation and commerce. Dargue's official report contained a wealth of data relating to the Latin American scene. The flight itself was an accurate gauge of Latin American feelings toward the United States. American officials seem to have had its experiences in mind when planning certain future moves concerning good will.²⁴ Despite the partial failure of the good-will mission, largely through circumstances beyond control of the flight, it was significant of future United States' change of attitude toward Latin America that official references to the flight included both "Pan American" and "Good Will."²⁵

In an address before the Inter-American Conference on Commercial Aviation at Washington in May 1927, Assistant Secretary of Commerce for Aeronautics William P. MacCracken, Jr., predicted that with the cooperation of business and industry a United States airline soon would be established over a "large portion" of the Pan American Good Will

Flight's 20,000-mile route.²⁶ He was not indulging in idle speculation. MacCracken was to be one of the select group who, a little over six months after the flight, made a very vital policy decision with respect to a United States-controlled airline in Latin America.

This decision did not come as an immediate result of the Pan American Flight. Between May and December 1927 other events transpired to influence decisive United States action. The Air Corps did not play a major role in the shaping of these May-to-December events, but on the other hand it cannot be denied that its action was part of a chain of events extending back to 1922. The first of these 1927 events was the great transatlantic flight of Charles A. Lindbergh in May of that year.²⁷ This flight brought new life to United States aviation, reviving and exciting public and official interest. In October 1927 a small new United States airline company, Pan American Airways, Incorporated (PAA), began to fly mail between Key West and Havana. Realizing that PAA was a genuine competitor, Scadta, through the Colombian government, began to apply pressure on the United States government for permission to use the Canal Zone as a necessary berth in any northward extension. Off came the velvet gloves as Scadta mounted a strident propaganda attack in Colombia and Panama, meant to force the United States to give in. This pressure led to a meeting in Washington, in November 1927, of representatives of executive departments, including MacCracken, at which it was decided the government should give strong encouragement to a United States airline to extend through all of Latin America. PAA was to be that line. President Calvin Coolidge quickly approved the decision.²⁸

By early 1928, Pan American Airways, Incorporated, with the assistance of the interdepartmental conferees and Postmaster General New, was planning its extension into Latin America. The company was the beneficiary of the past as well as the "chosen instrument" of current governmental policy. The routes it surveyed in the Caribbean, Central America, and South America had already been largely charted or tested by the Marine Corps,

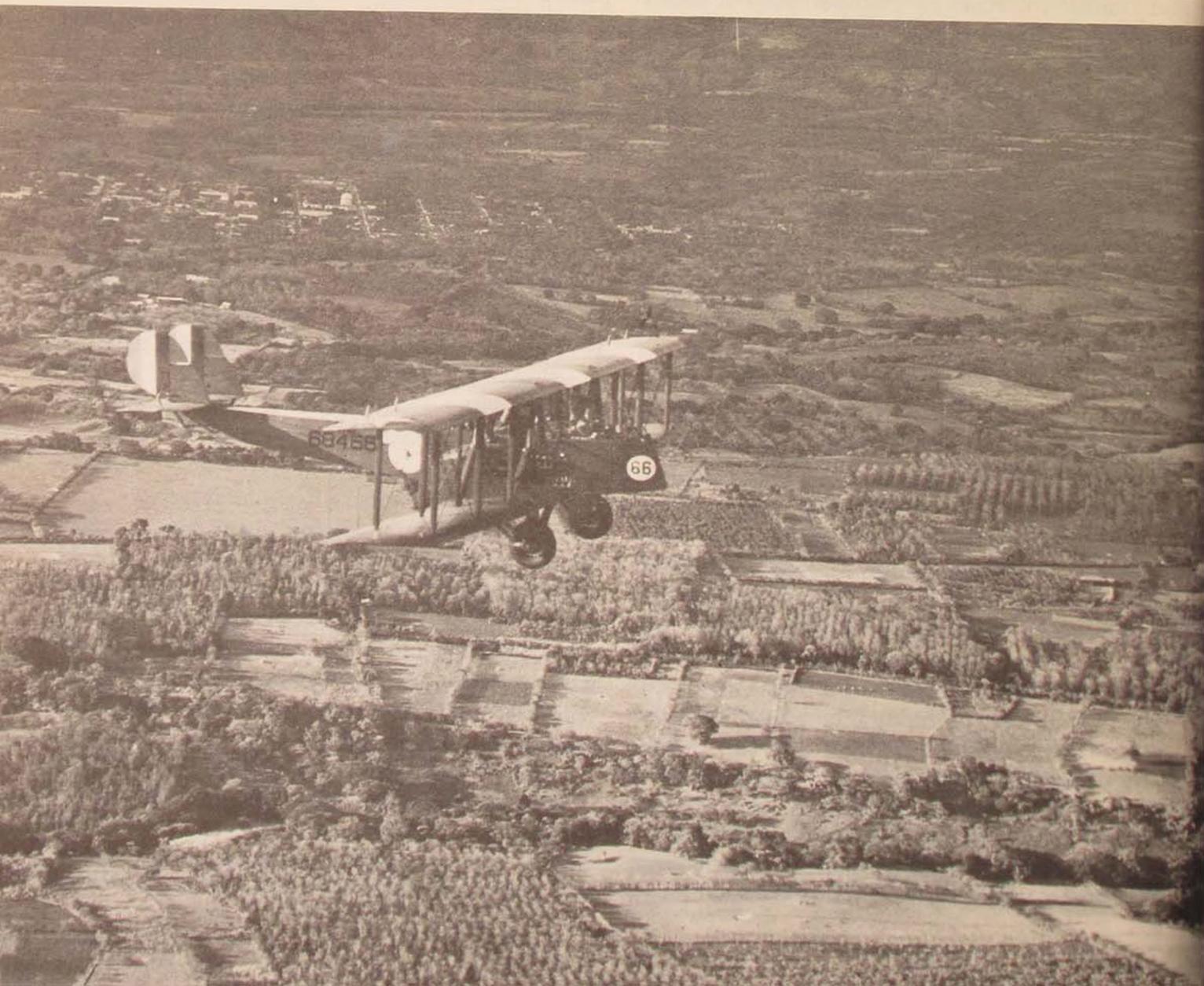
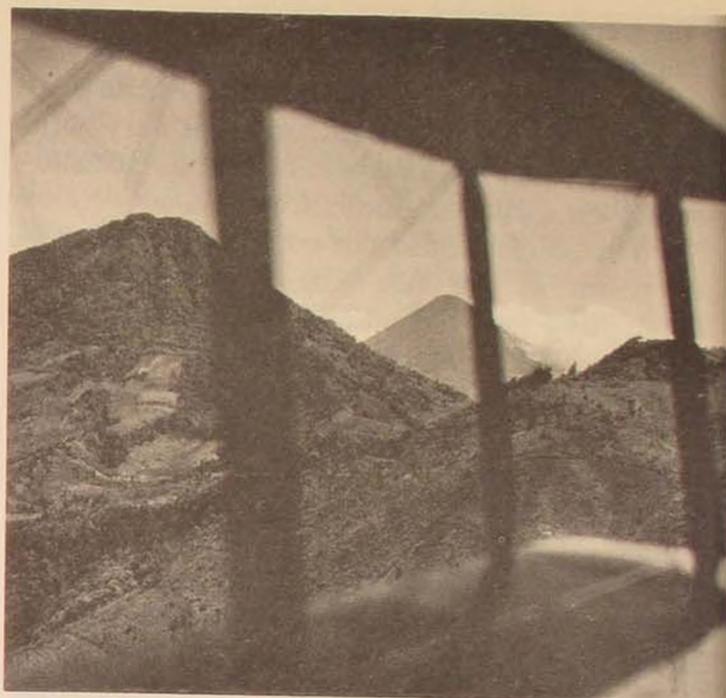
the Central American Flight, and the Pan American Flight. In the Foreign Air Mail Acts of 1928 and 1929, PAA was given an indirect subsidy; and by virtue of a provision in these acts that the Post Office Department could award a contract to a low bidder best suited to advance the interests of the United States, PAA could be and was favored in the awarding of contracts. The Department of State gave PAA extraordinary support. PAA also hired key personnel with experience in various branches of the government, including the military.²⁹

The Air Corps gave needed assistance to PAA in its efforts to span Latin American air routes. Early in 1929, for example, the United States Legation in Costa Rica sent an urgent telegram to Washington: unless Lieutenant John Jones of the Air Corps was given leave to pilot the PAA plane in Costa Rica, the company's service there might have to be discontinued. Such a breakdown, the Legation warned, would adversely affect delicate PAA contract negotiations with the Costa Rican government. That same day the State Department wired back that the Air Corps approved. A short time later Costa Rican authorities signed a contract with PAA. Also in 1929 Washington forwarded the discharge papers of Lieutenant Robert Williams to its ambassador in Chile, to keep the lieutenant from having to go to the Canal Zone for discharge. Williams, who became Pan American-Grace Airways (Panagra) manager in Chile, and other key Panagra personnel were involved in negotiations with Chile.³⁰

THE AIR SERVICE's effort toward an airline to Latin America was not its only activity in the post-World War I competition for pre-eminence in Latin American skies. As mentioned, the Air Service early in the post-war era recognized the need for preserving a vigorous aviation industry in time of peace so that wartime demands might be met. The Air Service's interest in synergy with the aviation industry has continued to the present, but in the 1920s Air Service policies and industry's wishes were not always synonymous. Whereas the British, French, and Italians after World

Central American Flight

The Central American Flight of February 1924 included a Martin bomber and two de Havilland aircraft. In three weeks they flew from the Canal Zone to Panama, Costa Rica, Nicaragua, El Salvador, and Guatemala. The Guatemalan volcano Atitlán (right) looms between the wings of one of the biplanes. With the President of Costa Rica aboard, the Martin (below) overflies the countryside near Alajuela. One of the de Havillands (opposite) is silhouetted over mountainous terrain near Puriscal, C.R.





War I sent to Latin America military air missions whose demonstrations and allocations of surplus planes aided the sale of their respective national products, the United States government resisted sending military air missions of any kind. Major General Charles T. Menoher, Chief of the Air Service from 1918 to 1921, opposed missions and the sale of military aviation equipment on the grounds that there were no surplus planes or engines to spare for missions or for foreign countries generally, that countries like Mexico might use military planes against the United States, and that private industry ought to make sales abroad directly. Also, doubt existed in some government circles that the Air Service had sufficient authority to send air missions. From time to time private industry importuned the Air Service to aid it in establishing more of a foothold in underdeveloped areas by easing restrictions on sales and giving direct assistance in the form of air missions.³¹

Under General Patrick, the Air Service did modify its position on missions and sales of government aviation equipment abroad, advocating increasingly a pragmatic approach in the matter of sales. At certain times it accepted the lead of the State Department. In 1924, following a request from the State Department, the Air Service released, without opposition, military planes to the Mexican government, which used them to help in quelling a revolt. Patrick urged passage of legislation that would clearly permit the sending of military air missions to advise Latin American governments. In 1926, when the Air Service became the Air Corps, Congress passed an act that allowed the sending of such advisers to Latin America.³² This was pioneer legislation, marking the first real step in a process that, while slow in developing, has seen air personnel influence Latin American military training. Today Air Force resources assist underdeveloped areas, like some in Latin America, to progress.³³

Another legislative act of 1926 affected the Air Corps role in Latin American affairs. This act gave the President authority to detail Air Corps officers to work with the Commerce Department in its promotion of commercial aviation. Even before passage of the act, the

War Department, at Patrick's prompting, gave Lieutenant James H. Doolittle leave to make a sales tour of several South American countries for the Curtiss company. His salesmanship, which included demonstrating a plane in Chile despite the handicap of two broken legs, helped persuade the Chileans to purchase nine Curtiss aircraft. Doolittle was also part of a quickened sales effort by the United States in 1928, when he was given leave to accompany a Curtiss sales team to South America. At the same time Lieutenant Leigh Wade of the Air Corps was in South America with a team representing Consolidated Aircraft Corporation. The two teams, both under the aegis of the Commerce Department, faced heavy foreign competition. The Curtiss force was successful in selling Chile a sizable order of planes.³⁴

Pan American Airways, Incorporated, also successful in 1928 in "selling" its services to a number of Latin American governments, inaugurated in 1929 its new lines connecting the United States with the Caribbean, Mexico, and Central America. Lines spanning and joining the coasts of South America and much of the interior soon followed. Air Corps personnel played roles in the process, and the dream of an airline for the sake of the Canal was nearer reality.

A related Air Corps expectation moved toward fruition in the years 1928-31. When Air Corps First Lieutenants James E. Parker and Robert W. Douglass flew from the Canal Zone to Washington, D.C., and back in the summer of 1926, they tested the two most plausible routes for flying between the United States and the Canal Zone. On the way north, traveling through Central America and Mexico, they found good facilities only at the Marine Corps base at Managua, Nicaragua, and at one Mexican field. They found the return trip by way of Cuba and Central America a better one but only because it was shorter. They noted that PAA used a field at Havana but had nothing beyond that. In 1928 the Air Corps was not flying many of its planes back and forth between the United States and Latin America because of the lack of adequate facilities.³⁵

In the summer of 1929, First Lieutenants Westside T. Larson and Lawrence J. Carr,

flying a Curtiss A-3, made a trip testing the Caribbean-Central American route to the Canal Zone, then flew the Central American-Mexican route back. They reported PAA installations or leased fields at Havana, Belize, and several places in Mexico. They had praise for PAA services and personnel "from Managua to Miami." When they bent a propeller at Belize, a PAA plane soon brought them a spare from the Canal Zone. Larson and Carr recommended that Air Corps flights between the United States and the Canal Zone should be "allowed and encouraged."³⁶

By the spring of 1930, PAA had a string of stations from Miami and Brownsville, Texas, to the Canal Zone. The company was supplying an increasing number of Air Corps flights with fuel, rest, and storage facilities, where available, and communications services at its landing fields along the two main Air Corps ferrying routes to and from the Canal Zone. These flights had to obtain clearance from the government of each country visited. In September 1930 Juan T. Trippe, President of PAA, wrote Major General James E. Fechet, Chief of the Air Corps, that his company was more than glad to assist the Air Corps and hoped to provide increased service in the future. Concerning use of PAA's communications service, however, Trippe reported that in several countries restrictions limited the use of that facility to company business, but PAA hoped to make arrangements that would terminate this inconvenience. General Fechet replied that he understood PAA's delicate position; the Air Corps did not wish to jeopardize the company's status in Latin America, and he would be content with those services PAA could extend. By December 1930 Trippe was able to tell Fechet that his company was in a position to offer its communications service without restrictions.³⁷

One of the most valuable communications services offered by PAA to the Air Corps was that of position reports to Washington and the Canal Zone on Air Corps planes flying between the Canal Zone and the United States. Flying in often turbulent skies over inhospitable stretches of land and water, Air Corps pilots were undoubtedly comforted to be able

to check frequently with one or the other of PAA's radio stations. This safety network PAA had perfected with its own planes. Other special PAA assistance to the Air Corps included cooperation in securing clearance at ports of entry. In Mexico, for example, local Mexican officials were alerted by PAA personnel at Brownsville in time to check with Mexico City about clearance for a scheduled Air Corps flight. The Mexican government usually granted permission for such flights but was often slow in notifying check points.³⁸

In 1931 General Fechet made a flight from the United States to the Canal Zone over the Brownsville-Panama route, touching down at the various PAA fields along the way. After his return he wrote Trippe that he found PAA's airway to Panama to be excellent and its services carried out with the greatest efficiency.³⁹ Fechet's praise for PAA was not a shallow formality: the company offered in some respects a substitute for a military airway connecting the United States and the Canal Zone.

By 1931 PAA had bested, pulled abreast of, or struck a bargain with its more important rivals in Latin America,⁴⁰ with the firm support of the United States government. It was fitting that by 1931 PAA was rendering the Air Corps assistance, for in part it was through persistent Air Corps efforts that such a giant as PAA had risen astride the air routes of Latin America. The future would reveal one indisputable value of PAA's existence in Latin America: during World War II the company helped to mitigate a threat to hemispheric security. Among its contributions were assistance in "de-Germanizing" Scadta, airport development at several strategic points in Latin America, and services for the Air Corps such as radio broadcasts for the safety of military planes.⁴¹

The Good-Neighbor Policy, hinted at in the 1920s and fully developed in the 1930s, proved essential to Latin American cooperation with the United States against a common threat. A manifestation of that policy was the good-will visit of U.S. Flying Fortresses to Brazil in 1939. The visit was "the means . . . for publicizing Brazilian-American friendship"⁴² during one of those crisis times when solidarity is a shield.

TODAY, more than forty years after the young Army Air Service sent its Central American Flight winging from the Canal Zone, the United States Air Force has one of its major commands, the USAF Southern Command,

stationed in the Canal Zone. USAFSO backs up the U.S. hemispheric policies embodied in the Rio Pact, the Military Assistance Program, and the Alliance for Progress, thus continuing a vital role of U.S. military aviation.

Auburn, Alabama

Notes

1. It was not until the rise of Hitler in the 1930s that aviation and ideology became inseparable components of the international competition in Latin America. Recent situations in which airborne objects figured in ideological rivalry in Latin America were the Bay of Pigs episode and the Cuban missile crisis.
2. Dispatch with enclosures of Alban G. Snyder to William J. Bryan, 29 April 1913, file 811f.796/-, Record Group 59, Diplomatic Branch, National Archives (Record groups in the National Archives hereinafter cited as R/G; Diplomatic Branch, as DB-NA); "Panama Canal 'Forbidden' to Aeronauts," *Flying*, II (September 1913), 28; Presidential Executive Order #1810, 7 August 1913. *Annual Report of the Isthmian Canal Commission and the Panama Canal for the Fiscal Year Ended June 30, 1914* (Washington: Government Printing Office, 1914), p. 560; 38 Stat. 2041; 40 Stat. 1668; 40 Stat. 1753-1754; Manufacturers Aircraft Association (comp.), *Aircraft Year Book, 1921* (Boston: Small, Maynard & Company, 1921), p. 204; *Year Book, 1920*, p. 299; *Annual Reports of the Navy Department for the Fiscal Year 1921* (Washington: Government Printing Office, 1921), p. 60 (hereinafter cited as Navy Annual Reports, 1921).
3. Wesley Phillips Newton, "International Aviation Rivalry in Latin America, 1919-1927," *Journal of Inter-American Studies*, VII (July 1965), 346-50; telegram of Arthur H. Geissler to Charles E. Hughes, 16 December 1922, file 813.796; dispatch of Geissler to Hughes, 5 January 1923, file 813.796/4, R/G 59, DB-NA.
4. Letter of John W. Weeks to Hughes, 12 January 1923, file 813.796/5; Weeks to Hughes, 2 March 1923, file 813.796/17, R/G 59, DB-NA.
5. Newton, pp. 347-49.
6. "Naval Aviation in South America," *Aviation and Aircraft Journal*, X (10 January 1921), 54 (Naval aviators also made some of the early postwar flights between the United States and the Canal Zone. See Navy Annual Reports, 1921, p. 55.); Major Raycroft Walsh, Official Report of the Central American Flight, n.d. Correspondence and Report re Central American Flight, file 373, R/G 18, Army and Navy Section, War Records Branch, National Archives. Official Report hereinafter cited as Walsh Report. Correspondence hereinafter cited as Central American Flight Documents. Section hereinafter cited as ANS-WRB-NA; letter of S. S. Bradley to Mason M. Patrick, 9 November 1921, file 360.01, Commercial Aviation to Policy-Civil Aeronautics, R/G 18, ANS-WRB-NA.
7. Letter of Adjutant General to Commanding General, Panama Canal Department, 31 August 1923, Central American Flight Documents. Because of tension between Mexico and the United States, it was decided to exclude that Latin American country from the charting for the time being. See letter of J. E. Fechet to Chief, Training and War Plans Division, 11 September 1923, reports (by country) Central America to Germany, file 360.02, R/G 18, ANS-WRB-NA (hereinafter referred to as Reports, Central America to Germany).
8. Letter of Harry S. New to Hughes, 6 September 1923, file 813.796/35; Herbert Hoover to Hughes, 13 September 1923, file 813.796/36; Edwin Denby to Hughes, 27 September 1923, file 813.796/37, R/G 59, DB-NA; first indorsement of Patrick, 25 January 1924 to a letter of Weeks to Hughes, 5 December 1923, Reports, Central America to Germany.
9. Letter of Luther K. Bell to Information Division, U.S. Air Service, 29 October 1923; Ira A. Rader to Aeronautical Chamber of Commerce, 5 November 1923, Reports, Central America to Germany.
10. Note of R. J. Alfaro to Hughes, 26 February 1923, file 819.796/2; Alfaro to Hughes, 15 March 1923, file 819.796/3; letter of Weeks to Hughes, 30 March 1923, file 819.796/4; Weeks to Hughes, 6 June 1923, file 819.796/7; dispatch of J. G. South to Hughes, 5 December 1923, file 819.796/12, R/G 59, DB-NA; William D. McCain, *The United States and the Republic of Panama* (Durham: Duke University Press, 1937), pp. 230-33; letter of Carlton Jackson to Director, Bureau of Foreign and Domestic Commerce, Department of Commerce, 21 November 1923. Aviation Reports (by country) Italy to South America, file 360.02, R/G 18, ANS-WRB-NA; "Panama Vulnerable to Air Attack," *Aviation*, XVI (4 February 1924), 131. In 1926 the United States and Panama signed a treaty, several provisions of which gave the United States tight control of aviation in the whole Panamanian area in peace or war. The Panamanian government, however, ultimately rejected the treaty, and the United States government had to resort to a web of regulations to limit, but not prohibit, flying in the area of the Canal from 1929 on.
11. Report of First Lieutenant Leland W. Miller on the Central American Flight, 16 April 1924, Central American Flight Documents; Walsh Report; report of First Lieutenant L. L. Beery on the Central American Flight, 6 March 1924, Central American Flight Documents (the latter report hereinafter cited as Beery Report).
12. Walsh Report; Beery Report; dispatch of John E. Ramer to Hughes, 5 April 1924, Central American Flight Documents; report of Captain H. M. Gwynn to Assistant Chief of Staff, G-2, War Department, 22 February 1924; dispatch of Geissler to Hughes, 14 February 1924, Central American Flight Documents; report of First Lieutenant B. T. Burt to Major Herbert A. Dargue, 24 November 1926, file 373-Aerial Operations-Pan American Flight, January 1927-October 1926, R/G 18, ANS-WRB-NA (hereinafter cited as Pan American Flight Documents).
13. Walsh Report.
14. In an early expression of one of the ideas implicit in the Alliance for Progress, Walsh advocated in his report the fullest participation possible by Central Americans in any air-mail service. It was necessary, he felt, for their national pride. Added evidence of the "harbinger" role of the Central American Flight is the fact that the War Department had authorized a flight of Air Service planes to participate, in December 1923, in Costa Rican municipal fiestas, after previous such requests by Costa Rica had been turned down. Ostensibly the reversal was to open the way for training experience in future flights of this nature, but the December flight undoubtedly was also a good-will gesture to pave the way for the Central American Flight. By 1923 the United States was beginning to see that demonstrations of good will might accomplish much. See letter of Commanding General, Panama Canal Department, to Adjutant General, 27 November 1923, Central American Flight Documents, and "France Field Pilots Fly to Costa Rica," *Aviation*, XVI (18 February 1924), 183. Shortly before the Central American Flight departed, General Patrick stated that he understood the Administration was attempting "to foster the goodwill of the Central American countries by all means within its power." See memorandum of Patrick to Secretary of War,

23 January 1924, file 452.1-3295-Sales of Planes Abroad, February 1930—July 1919, R/G 18, ANS-WRB-NA (file hereinafter cited as Sales of Planes Abroad).

15. Letter of Weeks to Hughes, 14 May 1924, Pan American Flight Documents; memorandum of D. G. M. (Dana G. Munro), 20 August 1924, file 811.71213/15, R/G 59, DB-NA.

16. Letter of Colonel Paul Henderson to Joseph V. Magee, 26 September 1924, Records Relating to Central American Air Mail Service 1924-26, Division of International Postal Service, Bureau of the Second Assistant Postmaster General, R/G 28, Social and Economic Branch, National Archives (hereinafter cited as Central American Air Mail Records, R/G 28, SEB-NA); memorandum of E. D. K. to Francis White, 21 October 1924, file 811.71213/8, R/G 59, DB-NA; report of Roy T. Davis to Hughes, 23 October 1924, Central American Air Mail Records, R/G 28, SEB-NA; letter of Acting Secretary of War to Hughes, 31 November 1924, file 811.71213/11, R/G 59, DB-NA.

17. Letter of Beery to Walsh, 12 November 1924, Central American Flight Documents; Dispatch of Davis to Hughes, 13 November 1924, file 811.71213/14, R/G 59, DB-NA; radiogram of Magee and Vincent C. Burke to Henderson, 11 November 1924, Immediate Office Correspondence Relating to the Air Mail Service, 1921-1927, Bureau of the Second Assistant Postmaster General, R/G 28, SEB-NA; letter of Major General William Lassiter to Adjutant General, 11 November 1924; Preliminary Report of Magee and Burke to Henderson, 19 November 1924, Reports, Central America to Germany; memorandum of New to Henderson, 8 December 1924, Central American Air Mail Records, R/G 28, SEB-NA; letter of Patrick to Adjutant General, 19 January 1925; first indorsement of Adjutant General, 2 February 1925, to Patrick letter of 19 January 1925; second indorsement of Patrick [7 or 10 (?) February 1925] to Patrick letter of 19 January; 3d indorsement of Adjutant General, 20 February 1925, to Patrick letter of 19 January, Reports, Central America to Germany.

18. "The Mitchell Trial," *Aviation*, XIX (23 November 1925), 747; *New York Times*, 13 November 1925.

19. Release of Post Office Department Information Office, 14 October 1925; *Panama Star & Herald*, 14 August 1925, Central American Air Mail Records, R/G 28, SEB-NA; letter with enclosures of Dwight F. Davis to Secretary of State Frank B. Kellogg, 9 September 1925, file 821.796Sea 2/34, R/G 59, DB-NA; Newton, "Aviation in the Relations of the United States and Latin America, 1916-1929," unpublished Ph.D. dissertation, University of Alabama, 1964, pp. 208-9, 149-54.

20. Report of Major Follett Bradley to Commanding General, Panama Canal Department, 17 August 1925, file 821.796 Sea 2/34, R/G 59, DB-NA; *New York Times*, 11-12 December 1925; memorandum of Major W. G. Kilner to Executive, War Plans Division, War Department, 10 November 1925; Major A. W. Lane to Assistant Chief of Staff, War Plans Division, War Department, 9 January 1926; note with inclosure of Kenneth Macpherson to Major George V. Strong, 9 January 1926; memorandum of Strong to Walsh, 12 January 1926; Walsh to Strong, 14 January 1926; Lane to Assistant Chief of Staff, War Plans Division, War Department, 15 January 1926, Central American Flight Documents; General H. H. Arnold, *Global Mission* (New York: Harper & Brothers, 1949), pp. 114-16; report of conversation between L. H. (Leland Harrison) and Viktor von Bauer, 7 December 1926, file 821.796 Sea 2/106, R/G 59, DB-NA.

21. Memorandum of Dargue to Patrick, 22 July 1925, Pan American Flight Documents; letter of F. Trubee Davison to Kellogg, 26 July 1926, Reports (by country) Italy to South America, file 360.02, R/G 18, ANS-WRB-NA; Official Report of the Pan American Flight, n.d., pp. 4-25, 21 December 1926-2 May 1927, file C71.6, R/G 18, ANS-WRB-NA (hereinafter cited as Pan American Flight Report).

22. Letter of Major Ira C. Eaker to Patrick, 22 January 1927, Pan American Flight Documents; Pan American Flight Report, pp. 291-99; reports of Lieutenant Colonel Edward Davis to Assistant Chief of Staff, G-2, War Department, 28 December 1926, and Charles Forman to State Department, 10 February 1927, Pan American Flight Documents; Pan American Flight Report, pp. 299-301.

23. Pan American Flight Report, pp. 87-89; Samuel Guy Inman, "Results of the Pan-American Congress," *Current History*, XXVIII (April 1928), 97-98; telegram of Philander L.

Cable to Kellogg, 2 March 1927, file 811.2310/246; dispatch of Cable to Kellogg, 7 March 1927, file 2310/284, R/G 59, DB-NA; *New York Times*, 3 May 1927.

24. The State Department withheld approval temporarily of Charles A. Lindbergh's good-will flight to parts of Latin America in late 1927 and early 1928, probably because of the Pan American Flight's experiences earlier in 1927. See telegram of Robert E. Olds to Dwight Morrow, 3 December 1927, file 811.79612L64/1, R/G 59, DB-NA.

25. In his report Dargue stated that his good-will mission ("men of war carrying a message of peace and good will") was a success in Latin America, but this mission was not understood in the United States.

26. *New York Times*, 4 May 1927. MacCracken was not the Commerce Department representative who had favored Von Bauer at the interdepartmental meetings in 1926.

27. Although a reserve officer in the Air Corps, Lindbergh's efforts toward furthering a United States airline in Latin America cannot be credited to the Air Corps. His efforts were individual or, as in his 1927-28 flight to Latin America that indirectly helped pave the way for such an airline, were in conjunction with the State Department.

28. Newton, "International Aviation Rivalry in Latin America," pp. 355-56; memorandum of F. B. K. (Frank B. Kellogg) to White, 29 November 1927, file 813.796/127, R/G 59, DB-NA.

29. *New York Times*, 10 and 13 January 1928; memorandum of Roger Willock to Wesley Phillips Newton, 8 November 1962; letter of Vernon E. Megee to Wilbur Brown, 28 June 1965; 45 Stat. 248 (as amended by 45 Stat. 1449-1450); memorandum of Joseph W. Stinson to Secretary of State Henry L. Stimson, 7 March 1931, file 810.796/35-1/2, R/G 59, DB-NA. PAA employed, for example, a former career diplomat with experience in Latin America, Evan E. Young, and a former Commerce Department transportation expert, P. E. D. Nagel, both men with invaluable experience and potential contacts.

30. Telegram of Roy T. Davis to Kellogg, 13 March 1929, file 810.79611 Pan American Airways, Inc./321 (this file hereinafter cited as 810.79611PAA); Kellogg to Davis, 13 March 1929, file 810.79611PAA/327; Davis to Stimson, 17 July 1929, file 810.79611PAA/541; Stimson to American Embassy, Santiago de Chile, 10 July 1929, file 810.79611PAA/535; dispatch of Ellis D. Briggs to Stimson, 13 July 1929, file 810.79611PAA/576, R/G 59, DB-NA.

31. Newton, "International Aviation Rivalry in Latin America," pp. 347-49; memorandum of Major General Charles T. Menoher to Chief of Staff, 9 July 1919, Foreign and International Affairs and Relations, file 336-December 1919-April 1917 (hereinafter cited as Foreign and International Affairs); Menoher to Chief of Staff, 14 July 1919; letter of Colonel Oscar Westover to Chief, Engineering Division, McCook Field, Ohio, 6 December 1919, Foreign and International Affairs; S. S. Bradley to Menoher, 16 December 1919, file 452.8-Liberty Motors-Sales and Transfer, March 1920 to September 1918; Bell to Rader, 5 November 1923, Foreign Aviation Reports, August 1934-January 1919, file 360.02, R/G 18, ANS-WRB-NA.

32. Memorandum of [joint Air Corps-Navy] Aeronautical Board to Secretary of War, 7 October 1926; Adjutant General to Chief of Air Corps, 14 January 1930, Sales of Planes Abroad; note of Manuel C. Téllez to Hughes, 4 January 1924, file 812.24/202, R/G 59, DB-NA; memorandum of Jacob E. Fickel to Chief, Property Requisition Section, 18 February 1924, Sales of Planes Abroad; 44 Stat. 565.

33. See three articles by Colonel Frank R. Pancake, Dr. A. Glenn Morton, and Majors Mathew T. Dunn and James B. Jones, *Air University Review*, XVIII, 1 (November-December 1966) for current Air Force programs affecting Latin America.

34. 44 Stat. 915; memorandum of Patrick to Chief of Staff, 9 April 1926, Sales of Planes Abroad; Harry Bruno, *Wings Over America* (New York: Robert M. McBride & Company, 1942), p. 230; dispatch of U. Grant-Smith to Kellogg, 9 September 1926, file 833.24/16; telegram of Kellogg to Rudolf E. Schoenfeld, 7 January 1928, file 820.7961 Dept. of Commerce Flight/7, R/G 59, DB-NA; *Papers Relating to the Foreign Relations of the United States, 1928, I* (Washington: Government Printing Office, 1942), p. 813; dispatch of Edwin V.

Morgan to Kellogg, 17 July 1928, file 820.7961 Dept. of Commerce Flight/27, R/G 59, DB-NA; *New York Times*, 26 October 1928.

35. Reports of First Lieutenants James E. Parker and Robert W. Douglass, 25 July 1928, file 373-Aerial Operations-Flights to and from Panama, R/G 18, ANS-WRB-NA; memorandum of Eaker to Chief of Air Corps, 25 October 1928, file 373-Aerial Operations.

36. Report of First Lieutenants Westside T. Larson and Lawrence J. Carr, 5 August 1929, file 373-Aerial Operations.

37. Memorandum of Major Willis H. Hale to Major Frank Andrews, 22 January 1930; report of First Lieutenant John M. Davies, 17 September 1930; report of First Lieutenant Donald F. Fritch, 1 November 1930; Directive of Chief of Air Corps to Commanding Officer, 28 December 1931; letter of Juan T. Trippe to Fechet, 29 September 1930; Fechet to Trippe, 18 October 1930; Trippe to Fechet, 3 December 1930, file 373-Aerial Operations.

38. Memorandum of Kilner to Chief, Materiel Division, 11 December 1930; telegram of Communications Department of PAA to Army Message Center, 20 February 1930; Communications PAA Miami to Chief of Air Corps, 30 November 1930; PAA to Chief of Air Corps, 3 and 5 December 1930; memorandum of Colonel R. C. Foy to Air Liaison Officer, Air Section, G-2, 20 August 1931; letter of Trippe to Lieutenant Colonel Ira Longanecker, 24 September 1931, file 373-Aerial Operations.

39. Letter of Fechet to Trippe, 13 June 1931, file 373-Aerial Operations.

40. Letter of Trippe to Stimson, 21 August 1930, file 810.79611PAA/865 (this letter informs the State Department that PAA had bought out its principal United States rival in Latin America); dispatch of R. Henry Norweb to Stimson, 22 May 1931, file 810.79611PAA/1006, R/G 59, DB-NA (this dispatch tells that the French Aéropostale Company, one of PAA's main foreign rivals in South America, was feeling the effects of the depression and that its desire for "route dominance" had abated "for the time. . ."); Albert E. Carter, *The Battle of South America* (Indianapolis: The Bobbs-Merrill Company, 1941), pp. 262-63. (This book records how PAA bought a controlling interest in Scadta in 1931. Scadta was not finished, however, as a thorn in the United States' flesh. It merely did not give PAA too much competition thereafter.)

41. For the story of the United States and Latin America in hemispheric defense, including the roles of the Air Corps and PAA, see Chapters VIII through XII by Stetson Conn and Byron Fairchild, *The Framework of Hemispheric Defense* ("United States Army in World War II"; Washington: Office of the Chief of Military History, Department of the Army, 1960).

42. *Ibid.*, pp. 269-70.

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Books and Ideas

SPACE—TO GROW IN

LIEUTENANT COLONEL EDWARD P. MAZAK, JR.

AMERICANS in particular seem to have a strong inclination to record things for posterity, to "get it down on paper" so that all can read and heed. Apparently we are convinced, and with some justification, that "experience is the best teacher." The military community has long been a strong advocate of using past experiences as a basis for applying tactics and strategies to new situations. This approach may be responsible, in part, for the slow, painful extension of the military into the arena of space.

Of course, the military is now irrevocably involved in space activities, much to the delight of some and to the regret of others. And now is an excellent time to examine carefully where we are and where we are going

in space. Also the opportunity now exists to consider how the current situation evolved and to learn from the experiences of the past.

The beginnings of the Space Age have been more than adequately described in two books recently published: *The History of Rocketry and Space Travel*† by Von Braun and Ordway, and *This New Ocean*†† by Swenson, Grimwood, and Alexander. These books have much to offer the military reader. Within the bounds of security limitations, both books provide an insight into the rationale that shaped U.S. space policy, with the added advantage that the subject is examined from different aspects. The special qualifications of the authors and the wealth of material available to them require no comment here other than



†Wernher von Braun and Frederick I. Ordway III, *The History of Rocketry and Space Travel* (New York: Thomas Y. Crowell Co., 1967, \$14.95), 244 pp.

††Lloyd S. Swenson, Jr., James M. Grimwood, and Charles C. Alexander, *This New Ocean: A History of Project Mercury* (NASA SP-4201; Washington, D.C.: U.S. Government Printing Office, \$5.50), xv and 681 pp.

to say that these "histories," as they are descriptively called, are not unemotional listings of events but are colored by the personalities and interests of the men involved, and beneficially so.

The History of Rocketry and Space Travel, as is apparent from the title, covers a considerable period of time in an effort to trace the development of the rocket motor and show its effect on military weapons. The book is interestingly illustrated and offers a tasteful mixture of science, fantasy, and personal analysis. It does not provide the serious military reader with the rigorous treatment of U.S. space and rocket theory and mechanics that he requires, but it was not intended for this purpose. For the student of astronautics and rocketry at the college level, though, the book is an excellent reference.

The authors and the publisher have packaged most attractively extensive information on this facet of technology. Most technical libraries should have a copy, to provide their readers with an appreciation of the men and technical skills that were required to exploit a new approach to the propulsion problem.

The major weakness of the book derives from essentially the same source as its strength. The personal experiences of Dr. von Braun in the initial development of rockets, for both military and space use, seem to overwhelm the efforts of others involved in collateral efforts. The Von Braun team comes on just a bit too strong for this reader's taste.

As a result of this emphasis the U.S. and particularly the USAF are made to look somewhat inept in organizing technical forces for the step into space. No one can deny that some unfortunate alternatives were selected and supported in excess of their value; but the difficulty of selecting the proper course for such a major new activity is minimized or ignored. Decisions that look black or white when reviewed in 1967 must have been quite gray ten years prior. In fact some of the basic decisions made then have not even yet been proven either good or bad. The one-gas versus the two-gas system is still being debated. The tragic accident at Cape Kennedy has not provided conclusive evidence that the choice of

a pure oxygen system was technologically unsound.

But in spite of its insisting "I told you so," the book does sell. The depth of material and the personal experience of Von Braun combine to produce an intelligent and understandable review of all those events that have fashioned our existing technology in rockets and space travel. Some of its timeliness will be rapidly overshadowed by the advance of the world's space efforts, so read it now!

The second book, *This New Ocean*, is considerably different in scope, approach, and purpose. Although its NASA team of authors has included some ancient history, the purpose is well served: to establish the technological base from which Project Mercury was launched. The book is composed of three sections, each written by a different man, yet the style seems consistent and a surprising continuity is maintained throughout. I found it interesting and readable. If there is too much detail for some readers, they must remember that the purpose of the book is to record events in detail.

The development of the Mercury program is shown from the civilian point of view, unlike the other book's military slant. Readers of both books will be able to draw some interesting conclusions about initial U.S. space efforts as a result of these two approaches.

But no matter what the approach, the Mercury program is fascinating reading. From the initial proposals, through the technological developments, to the ultimate successful orbital flights, the NASA team of authors has managed to capture the spirit that characterized the program. It is a privilege to get even part way behind the scenes and see just how a major national space program is organized, directed, and pursued. Aside from the managerial and technical skills associated with Mercury, the writers have managed to provide some indication of the personalities involved, a facet often lacking in histories.

In fact, the story of Project Mercury is basically a story about people rather than technology. The ideas and materials required to place man in space were available, but the stimulus to put them together derived pri-

marily from personality. These men did not always work in harmony, and the in-fighting must have been fierce, but the program increased in vigor as a result of the give and take involved. And of course the impact of the program on the American public was strengthened by the personalities of the astronauts themselves. Their impact on Mercury was perhaps more significant than any other factor.

This New Ocean tells the Mercury story fairly and completely. Everyone with an interest in space research and development will find it absorbing and profitable reading. Everyone with an interest in drama and adventure also will find excitement between the same covers.

IT SEEMS that there is much to learn from the experience gained in achieving manned orbital flight. The military community, in particular, stands to profit from a careful review of the initial efforts to master space technology. Several specific items caught this reviewer's attention in reading the two histories.

The services came out second-best in attempting to be first to put man in space and also in directing the succeeding Apollo program. At least part of the difficulty lay in the lack of a recognized in-house scientific expertise.

The technological risk inherent in the Mercury program was a paramount point in the selection of a civilian agency with a record of technical success to do the job. I do not minimize the desire of the government to establish space for peaceful purposes; but if the services had been better prepared to propose and defend their initial space programs with a generic technical competence on a par with that available outside the military, a combined approach by a NASA/military team might have proved to be more nearly the optimum solution.

The concept of using the combined talents of the civilian and military communities has, of course, been since introduced into the Apollo program with great success. I suspect that each group has learned to appreciate the

singular contributions of the other. But for such a partnership to continue to show a mutual profit, the contributions of both sides must continue.

What is derived from this part of the history is that the military cannot again neglect the area of research by its own people. The problems of the future are often solved by techniques discovered in pursuit of something quite different. The current practice of funding only those research programs that have a clearly defined objective is, at best, a short-sighted one. Surely the defense budget has a place for research programs, conducted by military scientists, that explore targets of opportunity or, in more common terms, areas of compelling interest to the researcher.

The Von Braun team was a significant part of the Army's efforts to accomplish the major portion of the nation's space program. Their technical competence alone almost made them successful. The Air Force, on the other hand, contracted for most of its technical support, and in my opinion this method was not as responsive as the Redstone organization. It is questionable that the Air Force was really ready to assume the primary role in putting man in space.

The number of engineers and scientists in uniform or employed directly by the services is quite large. Yet only a small percentage of these trained men actually perform in a scientific role. This does not mean that all scientists should be placed in a laboratory, given a blank check, and told to work as their fancy dictates; it does suggest that the military has the necessary basic technical resources but must organize this talent, provide adequate funds and facilities, and guide the research effort with a gentle, informed hand. No one can say what the next national crash program will be, but one can say with some assurance that a competent technical force will be required for its accomplishment.

Another interesting point hidden in the history of rocket development through the Mercury Project is that of compartmentalization of information. The fundamental work of Goddard on rocket theory was not as valuable as it might have been because his data were

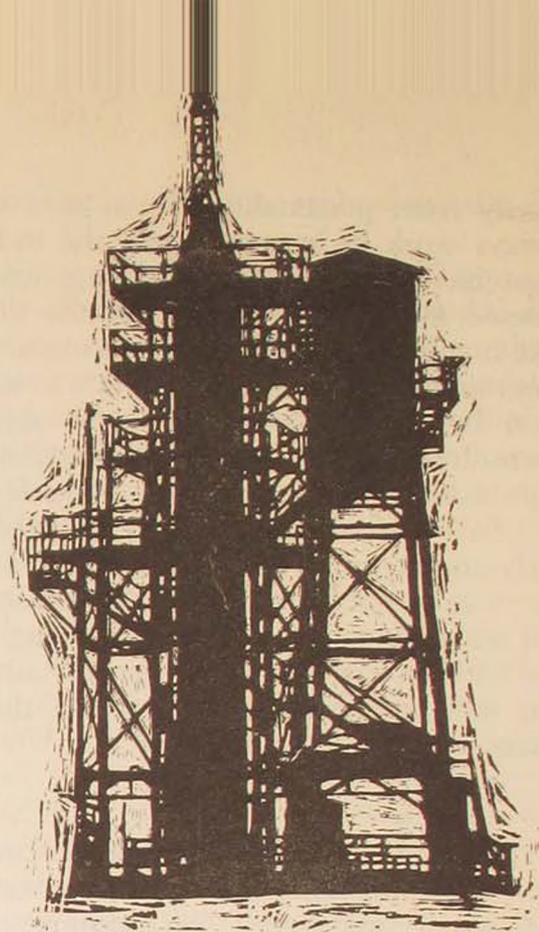
not disseminated to all those who had use for them. The end result was finally reached, but at the expense of time and some duplication of effort. Some similar penalties were paid in our early space efforts because of a lack of free interchange of information.

Even today most of the effort expended by the Air Force in the area of space systems is done under the "need to know" concept of security. Only those with a direct and specific requirement are allowed access to the project files. Those with a collateral or general interest in a particular subject find it almost impossible to learn what is being done. Under the present system the least effect is a slowdown in the proper exchange of ideas; worse yet, valuable information may be denied those who need it. Granted, security is essential; but so also is the timely exchange of knowledge. Perhaps some change can be effected that will satisfy both the security officer and the scientist.

One final point of salient interest to the Air Force reader concerns the developmental history of the rocket motor. Both in theory and reality, the rocket has been with us for a long time. This method of propulsion (excluding the ion and plasma systems) is now being pushed to practical, if not technical, limits. The physical size of our most powerful rocket is looming as the major barrier to placing large payloads in orbit economically. Some new technique or invention is needed.

One step in the right direction was the recent fiscal support given to the nuclear rocket development program of the Atomic Energy Commission. This particular program has been worked on at varying levels of effort for several years. It offers the hope of providing an efficient booster system that will enable very large payloads to be orbited.

The military must continue to search for a new solution to the propulsion problem. This can best be done by making effective use of in-house technical capability in consonance with the talents of industry. In the fiscal environment currently existing at the DOD level, it is difficult to obtain funds for research not specifically oriented to an end item. The savings resulting from this fiscal attitude may not



be enough to offset the overall disadvantage of maintaining an inefficient status quo. The problems of the future must be solved in the laboratories today. The number of solutions found is dependent upon the money and effort expended.

Not every Air Force officer will be interested in reading both *The History of Rocketry and Space Travel* and *This New Ocean* in their entirety. They are long books and quite detailed. But they do offer a chance to become acquainted with the magnitude and complexity of efforts associated with the early phases of our national space program. Every officer can find something of interest and value merely by thumbing through the pages.

The military services, and particularly the Air Force, are committed to the support that space systems now offer. It is essential that the services be aware of what the future can provide in this area of military activity. Men, money, and material must be made available to insure that succeeding generations of space systems are developed efficiently. Successes of the future will depend upon how much we have learned from the experiences of the past.

Defense Atomic Support Agency

CHINA AND THE PUBLICATION EXPLOSION

DR. KENNETH R. WHITING

And further, by these, my son, be admonished: of making many books there is no end . . .

Ecclesiastes 12:12

THE prophetic writer of those lines, if he were alive today, could add: "and the worth of the many books is becoming ever more transient or even ephemeral." Each world crisis brings forth an abundant harvest of instant wisdom embodied in hundreds of books cranked out by publishers eager to get in on the latest boom. Any survey of the plethora of works turned out since 1945 in which Soviet society is definitively analyzed reveals an inordinate amount of gross fabrication. The last decade has witnessed a flood of books which "analyze in depth" the underdeveloped world, especially Africa, but which did so in anything but depth. And now the China boom is on. Many of the current crop of books on Communist China fall into one of two categories: books written by people with little or no expertise on things Chinese, and those produced by acknowledged experts but obviously rushed into print while the market is still on the upswing. Harrison E. Salisbury's recent book on China† is in the first category, and that of John King Fairbank†† is in the second.

Salisbury's *Orbit of China*, as befits a top *New York Times* reporter, does at least have an interesting gimmick: a trip around the periphery of mainland China. The author began his journey in Tokyo, proceeded to Hong Kong, and then went into orbit around the

Chinese land mass, touching down in Cambodia, Bangkok, Vientiane, Calcutta, Gangtok, New Delhi, Moscow, Omsk, Irkutsk, Ulan Bator, Khabarovsk, Vladivostok, Nakhodka, and finally back to Tokyo—with a day or two in Kyoto to get the "sense of Japan's timelessness."

Salisbury's style is vigorous, and the book holds the reader's interest—as a travelogue if nothing else. Furthermore, interviews with such personages as Prince Sihanouk, Ne Win, and Hope Cooke (late of Sarah Lawrence and now the Gyalmo of Sikkim) are bound to be interesting. But Salisbury's analyses of these characters have all the profundity of a *Reader's Digest* "most interesting character" essay, while the descriptions of the countries are on a par with the jollier vignettes in *Holiday* but without the color pictures. His best reporting is done on Outer Mongolia, an area he knows more about, one that he has visited several times and also one that allows him to use his Russian expertise to advantage.

In his wanderings in Cambodia, Thailand, and Laos, Salisbury seems to have stumbled upon an unusual number of "ugly Americans" and to have found out about the usual number of CIA plots gone awry—two rather overdone targets that help give an "international muckraker" tone to his book. The reader also gains

†Harrison E. Salisbury, *Orbit of China* (New York: Harper and Row, 1967, \$4.95), xvi and 204 pp.

††John King Fairbank, *China: The People's Middle Kingdom and the U.S.A.* (Cambridge, Massachusetts: Harvard University Press, 1967, \$3.95), xi and 145 pp.

the impression that two of nature's noblemen, Sihanouk and Ne Win, are struggling valiantly to save something worthwhile out of the chaos being engendered by American policies in Southeast Asia.

Salisbury's real focus, however, is not the trip around China, but China itself. And it is his analysis of the China situation that leaves the reader disappointed. At this point the travelogue, which has something to be said for it, stops and the author becomes a "pundit" with an aura of impending doom about him. In spite of his numerous conversations with recent visitors to China and specialists on China, he comes up with nothing that he could not have found out in New York by reading his own newspaper. He waxes profound over China's population explosion, its nuclear development, and the imminence of a Sino-American conflict. Finally, in the last chapter, he pontificates at some length about the absolute necessity of a *rapprochement* with Peking if global disaster is to be averted. But he has nothing other than a few pious exhortations to offer. Any constructive suggestions about how American policy-makers can get through the xenophobic barriers erected by Peking are noticeably absent. One gets the impression that Salisbury is suggesting policy but is leaving the dirty details of its implementation to the same people whom he found botching things so badly all around China during his orbit.

PROFESSOR FAIRBANK produces a far wiser book. The disappointment comes mostly from the implications of the title, *China: The People's Middle Kingdom and the U.S.A.*, which promises too much. Actually, the book is a collection of his occasional pieces written for *Life*, *Foreign Affairs*, *The New Republic*, *The Atlantic Monthly*, the *New York Times Magazine*, *Diplomat*, and *Christianity and Crisis*. The articles cover a multitude of topics ranging from a review of Edgar Snow's *The Other Side of the River* to the impact of Protestant missions on China. The eager reader who seizes upon this book in expectation of a solid discussion of Chinese-American rela-

tions by one of America's foremost authorities on Chinese affairs finds himself instead jumping about from the Boxer Rebellion to Taiwan's role in the Peking *Weltanschauung*. Each essay is a gem in itself, but it was just as good when it first appeared in the mass media—I guess *Life* and the *New York Times Magazine* can be called that.

In an introductory apologia, Professor Fairbank points out that in addition to teaching their specialty in the groves of academe, the area specialists now go "further and tell their fellow citizens about it in speech and writing. When the area is a big public problem like China, the specialist may soon become a pundit and dispense instant wisdom like a columnist." Aside from the sardonic humor of the comment, Professor Fairbank has put his finger on an important role now being played by the scholar—the attempt to present to the public a reasonably accurate picture of the alien culture in which he is a specialist and in terms that are understandable to the nonspecialist. Although Professor Fairbank would be the first to deride his articles as "instant wisdom," nevertheless these brief essays cannot but leave the reader somewhat wiser, or at least not as apprehensive of a bewilderingly vague impending doom that looms from the Salisbury book.

Professor Fairbank sets the tone of the book in the first essay, "A Nation Imprisoned by Her History," in which he shows that the more Mao Tse-tung tries "to make China new, the more he seems to fall back on old Chinese ways of doing it." The rest of the essays fall into that pattern—the difficulties of trying to modernize China given the enormous friction of a cultural tradition several millennia old. Professor Fairbank, by putting recent events in China into the overall context of the nation's long history, is less astonished at some of the latest developments than are observers without his grasp of the eternal verities of things Chinese. For example, he sees the Red Guard movement as quite similar to the Boxer Rebellion of 1900—and for more or less the same historical reasons. In his last chapter, "Reflexions on 'The China Problem,'" he does not belittle the Armageddon that may ensue in the next

twenty years, but he does point out that, given China's history, we must not expect the Chinese to come up with a system of values like those generally accepted in the West. To quote Dr. Fairbank: ". . . Americans may develop the insight and self-control to deal with and contain the Chinese revolution, in the proper sense of the term."

THE USUAL CLICHÉ that has become so monotonous in reviews in scholarly journals, namely,

that "this work deserves a place on the shelf of every student in this field," does not apply this time. No shelf will be noticeably weakened by the absence of Salisbury's book, and the Fairbank opus should be enjoyed for what it is: a good collection of occasional pieces already available in widely circulated journals but conveniently put together in one book—probably with the intention of cashing in on a booming market!

Aerospace Studies Institute, AU

DOUHET AND MITCHELL: SOME REAPPRAISALS

MAJOR PERRY M. SMITH

THE doctrinal roots of American strategic air power theory have been debated in numerous books, historical studies, and doctoral dissertations, with each new work finding some previously uncovered root from which sprang the full-blown tree of American strategic bombardment theory. Trenchard, Mitchell, and Douhet make most of the lists, but Gorrell, Wilson, Caproni, George, Culver, Sherman, Walker, Peabody, Kuter, and Hansell, as well as many others, have been listed

as theoretical contributors to American air power doctrine. With each new discovery, a denial usually follows, and the discussion continues.

In recent years, two scholarly studies on the development of air power doctrine within the Army Air Service have collectively reappraised the influence of Douhet and Mitchell on American air power doctrine. One of them, by Hurley, investigates the development of air power ideas and concepts of America's fore-

most pioneer military airman, Brigadier General William ("Billy") Mitchell.† The other, by Flugel, concentrates on the Air Corps Tactical School and the intellectual inputs into that crucible of doctrinal development.†† The result of the research by these two scholars is an upgrading of the influence of Douhet both on the thinking of Mitchell and on the development of American air power doctrine. The curious similarity between the ideas of Douhet and the doctrine formulated in the Tactical School becomes less curious under the incisive investigations of Flugel and Hurley.

There is general agreement that the Tactical School at Langley Field, Virginia, later at Maxwell Field, Alabama, was the center of the explicit formulation of the American doctrine of precision daylight strategic bombardment, but the records of the Tactical School are frustratingly inexplicit as to the source material used by the instructors in the preparation of their lectures and manuals. The instructors, not being research-oriented scholars, were not constrained by the precise documentation standards of university research. They often used ideas of others without feeling any need to acknowledge their intellectual debt within the body of the lecture or manual or in footnotes.

Serious scholarship of the type that Lieutenant Colonel Hurley and Dr. Flugel have undertaken in their two studies is therefore limited in what it can accomplish, it being impossible to make unequivocal statements about doctrinal development within the Army Air Service and Army Air Corps. Therefore, these two works will not be the last on this general subject, nor will their conclusions be accepted by all. Nevertheless, each work makes a definite contribution, and any refutation of the conclusions reached will require considerable research and documentation.

Colonel Hurley has produced a much-needed work, the first scholarly treatment of Mitchell's ideas about air power and the impact of these ideas on the development of doctrine within the Army Air Service and Navy aviation circles. The only other satisfactory biography of Mitchell (*Mitchell, Pioneer of Air Power* by Isaac Don Levine) gives a vivid but journalistic picture of Mitchell the warrior, the champion of air power, the unrestrained competitor. What the Levine biography lacks is a tracing of the development of air power ideas by Mitchell, the influence of other air power leaders and theoreticians upon Mitchell's thinking, and the influence of Mitchell on the development of American air power doctrine within and without the Tactical School. Colonel Hurley, bridging this considerable gap by addressing himself to these three questions, has written a brief biography which lacks the flair and color of the Levine work but is much more satisfactory from a scholarly standpoint. Mitchell was such a colorful, dynamic, and controversial figure that his biographers have become fascinated with the public figure of Mitchell the protagonist. Since Mitchell the contributor to ideas about air power will probably outlive Mitchell the turbulent competitor in a turbulent era, the Hurley biography should be of greater lasting value than any previous biography of Mitchell. Hurley analyzes Mitchell the thinker by tracing his air power theories to their source. He finds Mitchell neither a seminal thinker nor a man without any original ideas; rather Mitchell is greatly influenced by Trenchard directly and by the Italian theoreticians Douhet and Caproni indirectly. Yet Mitchell neither accepts uncritically the ideas of others nor fails to make contributions to the theories about employment of air power that developed during World War I and the 1920s. Mitchell's con-

† Alfred F. Hurley, Major, USAF, *Billy Mitchell—Crusader for Air Power* (New York: Franklin Watts, Inc., 1964, \$5.95), x and 180 pp.

†† Raymond Richard Flugel, *United States Air Power Doctrine: A Study of the Influence of William Mitchell and Giulio Douhet at the Air Corps Tactical School, 1921–1935* (unpublished doctoral dissertation, University of Oklahoma, 1965; reprint by University Microfilms, Inc., Ann Arbor, Michigan, 1966; Air University Library 358 F646u), 270 pp.

tribution is considerable, for he accommodated the thinking of the European theoreticians to the American environment, an environment quite different—in geography, attitude, and strategy—from the European milieu.

Hurley's objective treatment of Mitchell is indicative of the serious scholarship concerning American military aviation which recently has begun to supplement the plethora of subjective studies of the last forty years. An objective biography is difficult to write; biographers tend to be overly critical or overly sympathetic toward the individual they have so painstakingly investigated. Hurley has avoided this bias by concentrating on the study of ideas. The reader should be aware that this is not simply a biography of a man; it is a concise, clear, and scholarly but not esoteric study of ideas.

Mitchell's ideas had a considerable influence on American air doctrine, yet this does not deny the European influence on that doctrine, both through Mitchell and through the Tactical School instructors' study of the writings of Douhet, Caproni, Trenchard, and others. Hurley's work, by focusing upon a single individual, cannot and does not answer all the questions about doctrinal development of American strategic air power theory (some are unanswerable), nor does it leave the reader satisfied that he fully understands the early development of United States military aviation. It does accomplish its primary aims (no more should be expected of any book), and it inspires the reader to look elsewhere.

THE FLUGEL dissertation is a logical next step, for it looks specifically into the doctrinal roots of American air power theory developed at the Tactical School. The results are exciting in one aspect and disappointing in another: exciting in that Flugel shows conclusively that Douhet's theories not only were available in English at the Tactical School as early as 1923 (a copy of a War Department translation of Douhet's *The Command of the Air* was received at Langley Field on 3 May 1923) but also were directly applied to a Tactical School text in 1926; disappointing in that

Flugel, in his obvious enthusiasm at uncovering an important link in the development of American strategic air power theory, overstates his case for the Douhetan influence.

All previous writing in reference to development of American strategic air doctrine has indicated either that Douhet had little or no impact on American doctrinal development or that his influence was indirect. The substantiating evidence up to this time has been the fact that there was no indication that any translation of Douhet's works reached the Tactical School prior to 1933 or that the instructors read Douhet until after they had formulated the American strategic air power doctrine. In addition, the individual instructors themselves have consistently disclaimed any intellectual debt to Douhet. Flugel proves beyond a reasonable doubt not only that Douhet's *The Command of the Air* was available in English but also that it was used in the formulation of American strategic bombardment theory.

The precision-bombardment element of American strategic air theory, as well as the theory that an economy could be destroyed through the destruction of a few key elements of it, were not Douhet's ideas; but the principles which *were* basically Douhetan and which previously were considered a result of independent thinking on the part of Air Corps officers have now been traced directly to Douhet through Flugel's systematic research.

Some questions remain, of course, including why so many officers deny the Douhetan influence, but it is difficult to refute the systematic research of Flugel when compared with the thirty-year-old recollections of Air Corps officers. Apparently, the Air Corps leaders who deny the debt to Douhet never thoroughly traced the vagaries of idea development from 1923 through 1935, either during the time they were instructors or subsequently.

Flugel, who is rather caught up in his admiration of Douhet, neglects the importance of Trenchard's thinking on both Mitchell and Air Corps doctrine. He uses Douhet's vagueness on the priority of targets to make broad generalizations about Douhet which are questionable. And he concludes his study by stating

that “. . . Mitchell himself fell increasingly under the influence of Douhet’s thought . . .,” whereas much of what Mitchell espoused in the 1922–36 period was a continuation of ideas he had developed during World War I. Hurley is probably closer to the truth when he states: “. . . any Douhetan influence on Mitchell was at best indirect and dated from World War I. Mitchell most likely regarded what he knew of the ideas of Douhet as only another argument for his point of view.”

Flugel says in his conclusion that both the massive retaliation policy of Dulles and Eisenhower and the counterforce policy of Kennedy and Johnson are predicated on Douhetan precepts. It might well be said that these policies are based on Douhetan vagueness about target selection. To quote Douhet in all his clarity on target selection:

All this sounds very simple, but as a matter of fact the selection of objectives, the grouping of zones, and determining the order in which they are to be destroyed is the most difficult and delicate task in aerial warfare, constituting what may be defined as aerial strategy. Objectives vary considerably in war, and the choice of them depends chiefly upon the aim sought, whether the command of the air, paralyzing the enemy’s army and navy, or shattering the morale of civilians behind the lines. This choice may therefore be guided by a great many considerations—military, political, social, and psychological, depending upon the conditions of the moment.

Flugel also correctly points out the impact of Douhet’s theories on the Air Corps Tactical School (ACTS) without emphasizing what theoretical contributions the Tactical School itself made to American air power theory. The ex-instructors stress the differences between ACTS doctrine and Douhetan doctrine, while Flugel stresses the similarity. Somewhere in between, perhaps, lies the reality.

The instructors at the Tactical School were infected with Douhet though many were unaware of the source of their ideas. In many instances they received Douhetan ideas quite indirectly—through Mitchell, through Tactical School lectures and texts, through the press. Yet it must be emphasized that except in the

mid-1920s the Tactical School never fully accepted Douhet, and throughout the 1930s new ideas were manifest at the Tactical School. The doctrine of precision daylight bombardment against potential bottlenecks in an enemy’s economy was an American concept, initially mentioned as early as 1925 but fully developed in the mid-1930s. By 1938 the Tactical School had rejected Douhet’s gross exaggeration of the destructiveness of TNT bombs and had advocated much larger formations against a target than had Douhet. By 1940 the Tactical School had rejected Douhet’s emphasis on enemy morale by pointing out that in China the Japanese bombing had actually strengthened the will of the Chinese villagers to resist.

Despite these modifications, Douhet’s influence is undeniable, and Flugel, by pointing out positive evidence of the early introduction of Douhet’s thought at the Tactical School, has made a useful contribution to the understanding of the development of air power theory and doctrine in this country.

Those who would intimate that our doctrinal roots are irrelevant to the problems of the 1970s might seriously consider developments of the last few years. The formulation of doctrine continues to play an important role within the military services, for the revolutionary ideas of Douhet became, in the 1950s, much less applicable as a rational basis for air power doctrine. Douhet, who was seemingly vindicated with the invention of atomic weapons, may have little applicability in the era of thermonuclear strategic missiles. By the mid-1950s the James Gavins and the Maxwell Taylors were beginning to point out certain inconsistencies in American defense policies. By the early 1960s the new Democratic Administration was unwilling to accept only the two choices presented it by the defense establishment of the 1950s: either thermonuclear holocaust or abject surrender. The result, of course, is evident: the resurgence of the U.S. Army since its period of decline in the 1950s—a period when the Army leadership seriously questioned and realigned itself doctrinally as well as organizationally, concentrated on unit mobility, guerrilla warfare, and small-unit in-

dependence. By 1961 the Army was fully ready to exploit certain doctrinal weaknesses of the other services. The pendulum swung because the Army was ready and willing to question the doctrinal basis of basic strategy.

There is much to be gained from doctrine, but when doctrine becomes dogma the dangers are evident. One fundamental advantage of a pluralistic democracy over more authoritarian forms of government is that competing forces within the military as well as within the

political element of the society constantly question the principles upon which policy is based. Douhet and Mitchell questioned a military doctrine that refused to encompass the important technological development of the airplane. They taught a lesson that should be constantly kept in mind: a doctrine that does not remain flexible enough to incorporate political, economic, strategic, technological, ideological, and sociological developments will never form a rational basis for policy.

United States Air Force Academy

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AWARD

The Air University Review Awards Committee has selected "Reorganization of the Canadian Armed Forces" by Air Marshal F. R. Sharp, RCAF, as the outstanding article in the July-August 1967 issue of *Air University Review*.

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