Berlin Airlift 50th Anniversary Commemorative Edition



OVER THE HUMP

William H. Tunner

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OVER THE HUMP

by

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FOREWORD

This book is a classic in the annals of air power history. William Tunner was a master of airlift operations at a time when the airplane itself was transitioning from the pre-modern into the modern era. His work encompassed airlift operations from the era of the Douglas C-47 and C-54, both of which launched major technological revolutions that dramatically affected subsequent aviation, through the gestation stage of the modern jet airlifter. Today, the C-17 Globemaster III airlifters that respond to America's needs for prompt and decisive airlift to the crisis points around the globe fly in the wake of the airman of the Military Air Transport Service and its predecessors that met the challenges of the Second World War and defeated Soviet intransigence during the Berlin blockade of 1948-1949. That history offers both lessons and confidence to national decision-makers and, in particular, to the men and women of the United States Air Force today as they project power, influence, and presence around the globe.

It is fitting that we reissue this work in 1998, the fiftieth anniversary of the Berlin airlift. The Berlin airlift was the first great challenge—and the first great humanitarian airlift—that the United States Air Force met as an independent service. That a prodigious airlift effort accompanied this blockade is evidenced by the following impressive statistics:

1,783,572.7 tons of supplies delivered,
62,749 passengers flown,
189,963 total flights,
586,827 total flying hours, and
92,061,862 aircraft miles flown by C-47 and C-54 transports.

Sadly, this came at the cost of 31 American fatalities during Berlin airlift operations, 28 of which were Air Force personnel.

The Berlin airlift was a milestone in the history of military aviation and the history of the Cold War. Quite simply, had the United States Air Force not met the challenges of Berlin, the Cold War might have had a very different history, and Western Europe might indeed have fallen under Communist thrall. When Josef Stalin threw down the gauntlet over Berlin, the Air Force never wavered in its resolve to defeat him. That it did so set the stage for the long European watch of the Cold War. When the Cold War ended in 1989, it represented the ultimate triumph and complement to the airlifters of Berlin. It is to them that this edition of this work is dedicated.

Richard P. Hallion
The Air Force Historian

Acknowledgment

I wish to express my full appreciation to Booton Herndon for his invaluable assistance in the research, organization, and presentation of the material in this book.

WILLIAM H. TUNNER
Lieutenant General, USAF

Contents

I.	Early Days	3
II.	Ferrying Division	11
III.	The Hump	43
IV.	The Orient Project	136
V.	The Berlin Airlift	152
VI.	Korea	225
VII.	USAFE	265
VIII.	MATS	281
IX.	Observations and Recommendations	318
	Index	333

Illustrations

following page 54

Harold Talbot, General Nathan Twining, General Tunner, and General Lauris Norstad

British Foreign Minister Ernest Bevin, General Lucius D. Clay, and General Tunner

A Chinese Airfield

The India-China Division

An Elephant Demonstrates His Technique

The Veteran C-54

Human Labor in the India-China Command

Evacuation Scene at Syichwan Airfield, China

Construction at Tegel Airfield, Berlin

A U.S.A.F. Hospital in Korea

Time Out for a Smoke at Chanyi Airfield in China

Multicolored Parachutes in the Skies of Northwest Korea

The Taj Mahal

General Tunner with King ibn-Saud of Saudi Arabia and U.S. Ambassador Wadsworth

General Tunner, Colonel Hamilton Heard, and Colonel Gordon Rust

Retirement Ceremony at Scott A.F.B.

OVER THE HUMP

CHAPTER I

Early Days

ONE sunny afternoon when I was an eager young second lieutenant at Rockwell Field, near San Diego, California, the Operations officer sent word that he wanted to see me. I hurried to his office, for a summons from the Operations officer was one all young flying officers answered with alacrity, enthusiasm, and hope. It might mean an opportunity to fly. I entered and reported.

"There's a three-engine Fokker sitting right outside my office there," he said, gesturing. "I want you to take her up to the Sacramento Depot."

"Yes, *sir!*" I said, turned smartly, and left the office. I'd never flown a three-engine plane before, and I hurried to it, striding along briskly in my cavalry boots and riding breeches. We didn't fly planes in those days, we rode them; we were supposed to get the feeling of the plane through the seat of our pants. The only difference between the uniform of a pilot and a cavalry officer was the leather helmet we substituted for the campaign hat. Oh, yes—and we left our sabers behind. I was just a little more than a year out of West Point then, and a month or so out of flying school. At Rockwell Field I'd been flying the old LB-3, or Keystone Bomber, which thundered along at seventy miles an hour, and I felt proud and elated and fortunate indeed at this opportunity to fly the sleek, powerful, speedy plane I was approaching. I had never been inside one before, but I'd heard from other pilots who had flown the Fokker that she was a wonderful ship. Even if she hadn't been, of course, it would have been a thrill to fly her. Young fliers in those days, I imagine, were much like young doctors. We were always eager to see new and different cases, and operate on them if anybody would let us. We'd fly anything—new or old, in good shape or bad (we knew very little about maintenance, and cared less) both for the sheer exhilaration

of it, and to build up our flying time. And now here was this beauty waiting for me.

No matter how eager I was to climb aboard and get started, I nevertheless carried out the usual preflight checks, and in a very proficient manner, too. I was certainly no engineer, either mechanical or aeronautical. I wasn't at all mechanically inclined. But I knew enough to walk slowly around the airplane, counterclockwise, looking for oil leaks or loose wires or cables. I jiggled the ailerons, rudder, and elevator to test their mobility, and kicked the tires for good measure. Then I stepped in the plane, looked into the cabin, and immediately froze.

A dozen pallid faces were looking back at me. Nobody had told me there were going to be passengers aboard. We stared at each other for a long moment. They certainly did not seem happy. At the time the public image of the all-American pilot was a cool and nonchalant old-timer with a weather-beaten face and piercing eyes, narrowed, with crow's feet in the corners from years of peering into the blue. The eager, shining face of a twenty-three-year-old second lieutenant could hardly have inspired my passengers with confidence.

There was no pilot experienced on the Fokker around to explain the dials and gadgets to me, but a mechanic was waiting. He pointed out such interesting things as the ignition switches, gas gauge, oil temperature and oil pressure gauges, and the gasoline tank switches for getting gas out of the different tanks. My complete briefing on this trimotored plane whose cockpit I was seeing for the first time was only a few minutes. Then he left—*he* wasn't flying.

I ducked into the office to get a clearance, but this only took a minute. I was not required to make a flight plan; there was no weather information, and the only map available was a Rand McNally California State map. Back in the plane, I did the same things I would have done with the slow old two-engine bombers—started the engines, warmed up the oil, checked the oil pressure and the revolutions per minute of each engine, and tested the wheel and rudders to see if there was any hitch in the controls. Everything seemed in fine shape, so I slowly taxied out onto the field. It was just an expanse of dirt and sand—no runways at all—and I proceeded on out until I was in a position to take off into the wind. There I revved up the engines to their full speed again, and checked oil pressure and temperature, the ignition on each engine, and

the fluctuating gas gauge. Again, everything was just fine. There was nothing further to do but take off. I glanced around to make sure I had the field and the air above all to myself, and gave her the gas slowly. The plane raised to the air beautifully. I climbed, circling North Island, where we were based in San Diego's harbor, looked down disdainfully at the Navy surface shipping in the harbor, and continued to climb slowly, headed north. I flew up the coast, over Los Angeles, and then crossed over the Tehachapi Mountains north of the city. It was the first time I had flown over them alone, and the scenery was ruggedly beautiful. On to Bakersfield, Tulare, and Fresno, and then up the San Joaquin Valley due north for Sacramento. It was a fine day for flying, and the ship handled like a dream. The three engines pulled us swiftly through the air at almost one hundred miles an hour. And think of the added safety factor! Why, if one engine went out, you still had two left. It was as safe as being in church, but not so safe that I did not continually and constantly keep a lookout ahead for any emergency landing places. If there was any one rule in flying, it was to know, every second, where you were going to land if you had to. A flight was not so much from San Diego to Sacramento as it was from this pasture here to that cornfield there to whatever that flat place was up ahead. You felt as though you were trying to steal second base when you lost sight of a field.

The trip, some 430 air miles, as I recall, measured on the road map, took about five happy hours. What a lucky, lucky guy I was, I thought as we cruised along. Not too many years before I'd been just another earnest and ambitious boy with eyes on the stars but no means of transportation.

One of five children, I was aware of the financial strain on my parents in educating us. One sister had already been put through teachers' college, two older brothers were in a local college, and I was to be next. My father was a newcomer to America, and although he had studied engineering at the school founded by his ancestor at Leoben in his native Austria, there was then not the demand for this profession that there is today. It would take some kind of a miracle to put me through college without putting a further strain on my father or adding to my mother's financial worries.

And then in my high school civics class in Roselle, New Jersey, one

day, when I was fifteen years old, I read of that miracle in my textbook. The book said that the United States of America maintained a military academy on the Hudson River where a boy could get a free college education if he was appointed by his congressman. I looked up from the page with a new hope. It was like coming out of the clouds to find a landing field right ahead. I wrote my Congressman, Ernest R. Ackerman of the Fifth District of New Jersey, asking for information on how to get appointed to West Point. Fortunately for me, Congressman Ackerman made his appointments on a competitive basis. From then on I crammed. I studied at home and used my scheduled study periods to attend extra classes. I never thought it at all unusual that I would work so hard for a free education; if I thought about it at all, I probably wondered why everybody else did not. When the time came to take the examination I got the highest grade, and entered the Academy at seventeen.

Four years later, when graduation time came around, my classmates and I talked endlessly about what branch of the service we wanted to enter on graduation. There were the Infantry, Cavalry, Field Artillery, Coast Artillery, the Corps of Engineers, the Signal Corps, and Quartermaster Corps. Each had advantages, each had disadvantages, and we discussed them interminably. I knew what I wanted. In our senior year the Academy gave us a week at Mitchell Field on Long Island, where we were told something about the Air Corps and were taken up several times. I rode in five different planes, as I recall, and though I was never permitted to touch the controls, I still remember each flight as a thrilling experience. No tricks, no stunts, nothing but just straight flying, but that was enough for me. *Man could fly.* I was the subjective proof of that electrifying statement. From then on there was no question in my mind. Sure, the Air Corps was considered the lunatic fringe, but the extra pay and additional opportunities for travel more than made up for that. On the other hand, the washout rate was high: seven out of ten officers failed to make the grade.

Of the seventy-seven West Point graduates who chose the Air Corps that year, however, fifty-five of us went on to receive our wings and to be permanently assigned to the Air Corps. I was one of them, and the first thing I did on receiving my wings was to confess my choice to my parents. I had kept it from them until then. It made them feel a little

easier to know that I had been flying for a whole year and had obviously lived through it.

I came out of flying school even more enthusiastic about flying than I had been when I went in. For one thing, it had been a constant competition—I against the instructors—and winning my wings made them mean a little more. For another, I just plain loved flying. It was a terrific thrill to get up in an airplane, all by yourself, and realize that you could fly. It was a feeling of mastery. You could put those planes in steep banks or graceful *chandelles* and, with your own hands at the controls, defy gravity.

And finally, the $62 extra we received for flying pay came in handy. We were in the depths of the depression, and the $125 salary of a second lieutenant had just been cut by 15 per cent.

And so I had reported to my first Army station, Rockwell Field, in cavalry breeches and riding boots. And this trip, to Sacramento in the Fokker, was one of my rewards.

I brought the plane down at the Sacramento Depot just as the sun was setting in the west. It had been a smooth, pleasant trip all the way. No one got sick; as far as I know, no one was ever scared. I taxied the plane up to the hangar, cut the engines, opened up the door, and let my passengers out. They all had big grins on their faces; they were seasoned air passengers now. I received their thanks and returned their salutes in a very businesslike way, as though I flew passengers around all the time.

One grizzled old infantry sergeant who'd obviously been around a long time came up and said, "Thank you for the ride, Lieutenant. It's the best one I ever had."

"Oh, have you flown much?" I asked him brightly.

"No, sir," he said, grinning. "This was the first time I was ever in an airplane in my life."

It probably did not occur to me then that for the first time in my aviation or military career I had engaged in air transport. I had flown people from one place to another.

Only in retrospect does that pleasant afternoon over California become symbolic. For there was certainly no way for that young bomber pilot to know that he was going on to fly, as commanding officer directly responsible for the operation, more men and more cargo over greater

distances than anyone else in the history of aviation, past, present, and for a long time to come.

Though I thought nothing of my first transport flight then, I have certainly recalled it many times over the years since, particularly when putting in motion elaborate and complex programs to make sure that no other pilot or crew member of an airplane under my command would be checked out with such casualness. I have sent tens of thousands of pilots out on hundreds of thousands of missions, and a good portion of my command function has been to see that these men were rigorously trained and meticulously checked out to fly a specific airplane over a specific route, and that the plane would get them there.

Not every man is lucky enough to see the development of an entirely new concept during his lifetime. I have had the extreme good fortune not only to have seen, but to have had a hand in—all within the short span of one military career—the development of military air transport from absolute zero to a major and significant role in the military power of America and the free world.

It all developed gradually. There had been, in the Thirties, an air transport outfit of sorts, operating a few C-36's and C-39's, forerunners of the great C-47. But air transport as we know it today began with the Ferrying Command, to which I was the third officer assigned, and grew, from the occasional movement of one airplane by one pilot, to a highly complex operation under my command, in which thousands of pilots, military and civilian, men and women, have delivered planes of all kinds all over the world.

Then came the operation over the Himalaya Mountains known as the Hump Airlift. We flew that airlift over the highest mountains in the world, in good weather or bad, over large areas of territory inhabited by the enemy and by savage tribes, even head-hunters, and with a confusing variety of planes. Through this airlift, and it alone, we kept sixty thousand American soldiers and nineteen Chinese armies sufficiently well supplied to tie down over a million and a half Japanese soldiers in China —enemy soldiers we would otherwise have had to fight in the islands of the South Pacific. All the Pacific campaigns, tough enough as they were, would have been that much more costly in American lives. We flew almost a million tons of cargo over that "Hump" and into China, includ-

ing food, ammunition, and gasoline, mules and steam rollers, and four Chinese armies.

After the hot war came a political period in our national history of cutting the military establishment to the bone, quickly and effectively. No part of that establishment was hit harder than air transport. Yet it was air transport which was called on in one of the first episodes of the new international situation known as the cold war, the Russian blockade of West Berlin. In 1948 military experts all over the world thought that West Berlin was lost to the free world, lost forever. Two and a half million people had to have supplies to survive—primarily food to eat, coal for warmth and light—and yet every surface route was closed to them. We moved into that situation with the Berlin Airlift. It lasted over thirteen months; in the last four months we were flying nine hundred round trips a day, delivering the necessities of life to the people of one of the world's largest cities. Nor was it all one-way traffic. To give one example, at the same time we were flying coal into Berlin, small locomotives manufactured in city factories for use in coal mines were being flown out to increase production of the coal we were flying in.

In the shooting war in Korea, we maintained two distinct air-supply operations. One, the longest airlift ever flown, brought supplies and troops from the United States across the Pacific to Japan. The other separate operation shuttled these supplies and troops to Korea. At one time an advancing, fighting army was supplied by Air Transport alone. In the tragic days following the unexpected counterattack by the Chinese at the Chosin Reservoir, the dead and wounded and frostbitten were flown out by transports landing and taking off under fire, and the retreating army supplied with bullets and even a steel bridge.

Since Korea the world has seen many airlifts. Unquestionably there will be several, heralded or unheralded, going on as you read this. Our Military Air Transport Service (MATS), which was my last command, flies airlifts continuously, both humanitarian and strategic. Following the 1956 Hungarian uprising so brutally put down by Communist forces, MATS airlifted over fourteen thousand Hungarian refugees to safety and freedom in the United States. When crisis loomed in Lebanon, it was MATS that airlifted troops to that little country, supplied them until the danger was over, then brought them back. It was MATS that delivered the necessary goods when trouble brewed in the Taiwan Strait over the

little islands of Quemoy and Matsu. Its activities have been on steady increase. In the fall of 1962, for example, in addition to carrying out routine duties including global airlifts, MATS was called upon in rapid succession to fly federal troops to Mississippi to maintain order, fly soldiers and Marines and material to assembly areas in Florida and Guantanamo for the Cuban situation, and deliver aid to India, under attack by Communist China.

MATS can be termed the bellwether of international trouble. For when trouble breaks out, it must of necessity be MATS which first responds to the emergency call. MATS must have the planes ready before the Marines or paratroopers can get in them. Thus MATS trains 365 days a year; it is always ready for D-Day.

From my experience of many years in the old Air Transport Command, as commander of MATS in 1958–1960, and as commander of the three greatest airlifts in history—the Hump, Berlin, and Korea—I want to give in this book the first over-all picture of what we accomplished and how it was done. From the Hump on I have been convinced that we can carry anything anywhere anytime.

CHAPTER II

Ferrying Division

WORLD WAR II saw the rapid development of every phase of modern warfare, on the ground, at sea, and in the air, and since it ended many volumes have been written on particular areas of the military art. Little, however, has been written of one military service vital to the prosecution of modern war, that comprising the transport of materiel by air and the delivery of airplanes themselves from the factory to the combat zone. It is a story of many facets, of continuing developments which vitally affect the civilized world today.

In the very first month of the organization set up to perform that new service, the positive fact became clear that, just as the use of the airplane as a tactical weapon requires a special *expertise* and just as the use of the airplane as a strategic weapon requires a special *expertise,* so, too, does the use of the airplane to transport war materiel and the delivery of the planes themselves to where they can be used against the enemy require a special *expertise.* It was true in 1941, and it is true today.

We have come so far, learned so much about military air transport, and have so thoroughly proved its worth, as in the Hump, the Korean, and Berlin Airlifts, that it seems almost incredible that up until three o'clock in the afternoon of May 29, 1941, there was no organization of any kind in American military aviation to provide for either delivery of planes or air transport of materiel. By the end of that day, the Air Corps Ferrying Command, which grew into the Air Transport Command, with its major component the Ferrying Division, was in existence with an assigned military personnel of two. Four years later, in June, 1944, when the activity of the Ferrying Division reached its peak—and I had advanced from personnel officer with the rank of major to its commanding

general—I had a total personnel of fifty thousand, military and civilian, under my command, including some eighty-five hundred pilots.

By the end of the war, the Ferrying Division had delivered 21,092 planes to foreign destinations and made 291,525 domestic ferrying movements. Its regular routes circled the world. Lines radiated out from the continental United States in every direction: South to Natal, Brazil, then east over Ascension Island to the coast of Africa, thence on across the vast expanse of Central Africa to the Middle East, Russia, or India; north to Alaska for delivery to the Russians, or up through Newfoundland, even Greenland, thence to Europe; east to Europe, by way of the Azores, and west to the Central and South Pacific.

There were transport routes, too, with regularly scheduled flights operating day and night. Before the war, remember, what few overseas airlines there were flew only in daylight. Our planes roared on their missions, carrying vital supplies to the fighting fronts, returning the sick and wounded to the hospitals nearest their homes on a constant, round-the-clock schedule. Many of those routes planned and laid out in wartime are still being used today, both by the military and by civil airlines. Many of our achievements of those hectic days, in short, continued on after the war, providing safe, speedy, and economical transportation for civilians as well as for the military.

Furthermore, during those years, through their own determination to do the best job they could with what they had to do it with, experts in the completely new field of air transport, were developed, as well as much of the know-how in aviation today, both commercial and military. Out of the tragedy of the war came knowledge and experience that would have taken many more years to amass in times of peace.

I was in on the development of this completely new field from the beginning on to well past the point where we had our major problems licked. I was the third officer assigned to the new command. At that time the United States Air Corps had no transport planes. No airplane had ever been delivered across the sea, and world-wide travel by air was in its infancy.

The events which pushed me into this challenging new field had begun one sunny day in Memphis, in 1939, the day Major Victor Beau came out from Washington to inspect the happy little detachment I was running there. As we walked over the layout together and saw things appar-

ently getting done, then went back to my office where I was, thanks to a seven-day week, all caught up with my paper work, I noticed the gleam in the Major's eyes getting brighter and brighter. But I didn't realize what that meant until it was too late.

My little kingdom was known officially as the Memphis Air Corps Detachment, and it was a pleasant place to be. First of all, I was on my own; I was the only officer on permanent duty there. I had a sergeant and some fifteen enlisted men and a civilian secretary, and occasionally a reserve officer would come to spend his two weeks on active duty and help out, but in general, the problems and responsibilities were mine, all mine, and so were the accomplishments. When I first went to Memphis, a captain with eleven years service, the only thing that awaited me was one empty hangar. Five airplanes of assorted types had been promised by Air Corps headquarters, but they hadn't arrived.

One of my first duties was to hire a secretary. I called the local civil service office and was given several names. I called on down the list, and, inasmuch as the day happened to be a Friday and I wanted to get started as soon as possible, requested that applicants come out to the field for an interview on either Saturday or Sunday. That eliminated a few right there. One of those who did come out, on Sunday afternoon, was Miss Catherine Gibson. She seemed most proficient and intelligent, not to mention independent.

"Of course," I warned her during the interview, "we're a few miles out of Memphis, and you will have to make arrangements to get here yourself."

"Tell me, captain," she said sweetly, "just how do you think I got here this Sunday afternoon?"

I learned later that she never expected to hear from me again. Actually, I called her bright and early the next morning and asked her to come to work. Miss Katie was to be with me on and off for over twenty years, at home and abroad, whenever it was possible for me to have a secretary. Through the years many men and women, funneling through my office, have come to know this loyal and capable assistant with respect and affection.

I worked long and hard at Memphis, my first command, but every minute of it was a pleasure, because I could see the results of what I was doing. My primary job was in the building up of a flying reserve corps

by interesting young civilian pilots in becoming reserve officers in the Air Corps. One of the first I signed up was a young fellow named Red Forman, who ran a skating rink in town and did a little flying weekends. At this writing Brigadier General Robert D. Forman is commander of MATS in Europe.

Another of my jobs was to see to it that military planes stopping in on trips east or west, north or south, received prompt and efficient maintenance, and the right grade of gasoline and oil. With a good crew of mechanics well provided for, and a supply section that functioned well under firm supervision, I was able to get these duties carried out with a performance record which was routinely high.

At the time I had no idea why I, just another one of a few thousand Air Corps captains, should have been given such a delightful job. Since that time I have assigned a few thousand officers to various assignments, and I can see some reason for packing up Captain Tunner and sending him to that empty hangar in Memphis. On the basis of my military background, I was practically polarized for the job.

I'd learned the secret of paper work back at Rockwell Field, years before. At that time the Army was working only a half day. Officers would perform their routine tasks in the morning, take off for lunch, and be through for the day. Everybody, that is, but the Air Corps. The brass didn't quite know what to do with us. We drilled like everybody else, we had the same paper work as everybody else, and on top of that we flew. I drilled in the morning and flew in the morning, which meant, if you can imagine such an indignity, that I had to do my paper work—I was adjutant—in the afternoon. The quicker I got the job done, the sooner I could join the other officers at the swimming pool or on the golf course. I found that when I got right down to my papers, dull as they were, and did the job instead of moaning about it, I could accomplish in an hour or less the work other officers were spending the entire morning on.

After Rockwell Field I had four years as a flying instructor at Randolph Field. It was easy work, and I couldn't help but learn a little about human nature above the ground. From there I went to the Panama Canal Zone—and a different Army. There was no half day at Panama. For one thing, the area around the canal has always been sensitive. For another, Hitler was now beginning to be recognized as a future menace to the

peace of the world, and Germany was seeking to increase its influence in Central and South America. We were on our toes there.

The mission of the Air Corps in Panama was to defend the Canal Zone by bombing enemy ships. My duties included running the Anti-Aircraft Intelligence Service, or AAIS. This consisted of detachments of men, equipped with radio sets, located along the coasts of Panama. Radar was still unknown. The idea, of course, was to spot hostile planes and give warning by radio. The word was flashed from set to set, down the coast, until it reached the military officials in the Canal Zone. We ran exercises constantly, but we rarely got word that a bomber was approaching until we could look up and see it. However, the idea was basically sound.

Thanks to my reputation with paper work back at Rockwell Field, I was rewarded with more of it in Panama. At Rockwell I had done a dull job efficiently in order to get it over with; in Panama I gave it my best because it was fascinating. I was operations officer, and my administrative work dealt entirely with flying, particularly the scheduling of flights. Even after starting out at 7 A.M. in the morning with close-order drill, I didn't mind coming to the office, unbuckling my saber, and working the rest of the day on operations. I found out there was a lot more to flying than simply boring holes through the sky. Neither planes nor men could fly constantly. Planes required maintenance, men required rest. Schedules of both had to be planned assiduously in order to have planes ready to fly at the same time crews were available to fly them.

We worked closely with the Army in the Canal Zone, trying to evade the anti-aircraft searchlights and tracking stations, towing targets for the anti-aircraft guns, as well as flying bombing and reconnaissance. I became so interested in this work that I asked for, and got, three years at Fort Benning as operations chief of an Air Corps unit working with ground forces. After that, and a three-month course at Maxwell Field, I went to Memphis with a well-rounded education and two silver bars to take over one empty hangar. Incredible as it may seem today, incidentally, that hangar was the property of Memphis, built at the city's own expense and loaned to the Air Corps as a friendly and patriotic gesture. This presentation, exactly the opposite of what we have come to expect over the postwar years, was typical of the hospitality the city gave us.

Although there were not a great many civilian pilots in any one com-

munity in 1939, in my entire area—northern Mississippi and Louisiana, Tennessee and Arkansas—there were quite a few. I got in touch with them all—airline pilots, weekend fliers, crop dusters—and invited them to join the Air Corps. By today's standards, I had little to offer the new men. They received no pay whatsoever, except for the two weeks of active duty they could pull every year, and that would barely pay for their uniforms. But we had much more than a government payroll. We had camaraderie, the spirit of adventure, an intense love of flying, and the desire to make this technical skill available to the United States. After I got a few fellows in, the growth of the detachment snowballed. I made frequent flights, to New Orleans or Atlanta, or even to Washington, and I always took along one of the new Reserve second lieutenants as copilot. This was the greatest reward I could tender. The idea of flying somewhere with government gas was in itself a thrill. And when we'd get up above the clouds, or even fly at night, so that we could fly on instruments, to a weekend pilot who had previously flown only by visual rules and the seat of his pants this was new and different and stimulating. Wherever we went or whatever we did, there was an adventure of some kind. One time over Mississippi an oil line burst, and the entire interior of the plane, as well as my young copilot and I, were immediately covered, and covered all over, with oil. The windshield was smeared completely. I had to wipe my oily face with my oily hand and roll down the window and stick my head out in order to see. I brought the plane down in a rough but safe landing in a cotton patch, and my copilot and I climbed out. We looked at each other, two oil-soaked, miserable-looking creatures, and roared with laughter and relief. You can bet that we all talked about that one for weeks.

Memphis was a constant challenge, constant adventure, constant fun. Actually, it was a whole base in miniature. I had sixty-five monthly reports to fill out, including those of the base commander, operations officer, adjutant, supply officer. I had the same problems that the commander of any large base would have, but less, of course, in content, and I could handle them in my own time and in my own way.

Anyway, things were going along fine that day Major Beau came in from Washington to look us over. On toward the end of the day, after I had proudly shown him everything good that we'd done, he looked at me speculatively and said:

"Say, Bill, how'd you like to come to Washington?"

Without thinking, I said, "Frankly, sir, there's nothing I'd hate more."

Within a month I was there.

I have always dreaded working in Washington. It is confining and frustrating. In Washington, whether in Air Corps headquarters then or the Pentagon now, a man in the armed services rarely indeed sees the accomplishments of his work. He can work for weeks, months, even years on a project and never see any materialization of it. He can reach an important decision, arrived at only after much staff work and thought, and never know what effect his decision made, if it made any at all. He can't see the airplanes fly or the people move or change direction. And when you get caught up in one of the inter-service rivalries, your most vigorous action is like punching a pillow.

The important job for which I left Memphis turned out to be sitting in an office writing orders moving airplanes around. I had nothing to do with who went where; I merely took the memorandum concerning the airplane, found a driver among the sixteen hundred pilots then in the Air Corps, then wrote an official order telling him to fly it from where it was to where it was supposed to go. It was about as boring a job as it is possible to get, but yet it did have one advantage. Many of the orders I wrote would direct an officer to proceed to the West Coast, pick up a plane at one of the aircraft factories there, and fly it back to one of the fields in the Southeast. Sometimes there was no officer available, and so, with an O.K. from my boss, Colonel Asa Duncan, I began ordering myself to go. About three times a month I'd take the American Airlines sleeper plane—an extinct luxury today—out of Washington at 6 P.M. Friday and arrive in Los Angeles around eight o'clock Saturday morning. A representative of the aircraft factory would meet me at the airport, and drive me to the plane. Most often it would be a basic trainer to be delivered to a flying school near Macon, Georgia, or Montgomery, Alabama, or somewhere in the South. If it were a new model or a more complicated job, I would try to read some of the specifications on it, or at least have the factory representative show me around the plane. I'd take it up, circle the field once, and land it before starting out for my destination. I'd usually manage to get away by 9 A.M., and have an enjoyable flight across country, sometimes even stopping in to see what was going on at Memphis. I'd reach Macon, say, Sunday evening, get a

ride to Atlanta, and take the airlines plane out for Washington that night. I never missed being home in bed by midnight, and back at my desk at eight o'clock Monday morning. A weekend of flying, and all without missing a minute's work at the office. I made these trips entirely for fun, with no idea that I'd someday be in the ferrying business, where this experience would prove helpful.

Being in the plane delivery business myself, if only on a weekend basis, I was beginning to feel some concern over the problem of international plane delivery to our friends overseas. That was the bleak summer in which the Battle of Britain began. Each day the news of destruction and horror which filled the papers seemed worse. People returning from London verified the carnage. England needed everything we could send. Indeed, fear was officially expressed that unless we accelerated the delivery of aircraft to Britain they might not arrive in time to be of any use. Yet our Neutrality Act was in force at the time to such an extent that in order to get planes into Canada and thence to the United Kingdom without breaking the law, we actually had to push, rather than fly, the planes across the Canadian border.

The British organized the Atlantic Ferrying Organization, called Atfero and composed largely of Americans, to fly the larger airplanes across the North Atlantic. This was daring indeed in 1940, but the British were desperate. They paid the Atfero pilots fifteen hundred dollars a month, a fantastic sum in those days.

After passage of the Lend-Lease Act in March, 1941, top Air Corps officers began planning ways in which we could help deliver planes to Britain, and at the same time train more pilots for our own eventual ferry use. General H. H. Arnold, after a trip to England in which he discussed the matter with his British counterparts, called the whole problem to the attention of President Roosevelt. On May 28, 1941, a letter went out from the White House to the Secretary of War. Certainly a broad and sweeping document, it reads as follows:

Dear Mr. Secretary:

I wish you would take the full responsibility for delivering planes, other than the PBYs, that are to be flown to England to the point of ultimate take-off.

I am convinced that we can speed up the process of getting these bombers to England and I am anxious to cut through all of the

formalities that are not legally prohibitive and help the British get this job done with dispatch.

I think that Lend-Lease funds can be used to some extent in connection with fields in Canada and Bermuda.

For your confidential information I am suggesting that the R.A.F. take the responsibility for the planes at the point of ultimate take-off but whether this suggestion of mine is approved by the British Government or not I want the Army to make sure that these planes are delivered speedily.

Very sincerely yours,
/s/ Franklin D. Roosevelt

The very next day Colonel Robert Olds was assigned to set up the Ferrying Command. The selection of Colonel Olds in itself underlined the importance of the job. He was a World-War-I pilot who had made a great name for himself in military aviation. He had commanded the famous Friendship Flight of six B-17's to Buenos Aires and back. He was a forceful and independent man; he'd speak up to officers of higher rank almost as quickly as he'd blister a subordinate. He suffered with arthritis, and on the days when his swollen joints pained him exceedingly he was even more irascible. But Olds was no cripple. He had energy to burn, on and off the job. He loved high living, and he loved women, too, for that matter; he'd been married four times by that time. He drove himself furiously and within a year he was a major general. Within another year he was dead. He'd given all he had.

Olds attacked the problem of the Ferrying Command in his typical direct and tape-cutting fashion. He secured his first subordinate, Major Edward H. Alexander, that very afternoon, May 29, and I was next. I did not know Colonel Olds at the time, and I made no effort to escape. Anything, I thought then, would be better than writing orders all day long; I would be getting closer to the war.

Olds had been given, for his important new command, a section of the basement in the munitions building. We moved the musty files out of the way ourselves, cleared space for a few desks, and had lights put in. There was one dingy window; it opened up on the platform where the cafeteria kept its garbage cans. Colonel Olds had a glass partition built, which gave him some privacy and a little more prestige, but the rest of us worked from our desks in the cleared-out area for months.

At the beginning we had tremendous power. One of our first directives, for example, signed by Major General E. S. Adams, adjutant general of the Army and not an Air Corps officer, was included in a letter addressed to all commanding generals of all armies on the subject of "The Constitution of the Air Corps Ferrying Command." One sentence in it read: "The chiefs of arms and services, commanding officers of posts, camps and stations and other agencies under War Department jurisdiction are directed to give first priority to the activities of the Air Corps Ferrying Command when the assistance or cooperation is required." Thus, if anybody was ferrying an aircraft across country and stopped in at an Army Air Corps base, all he had to do was wave this directive around and everybody on the base had to stop work and take care of that airplane. Bob Olds was the only one who ever did produce it. He was dynamic and demanding, and he loved to wave the directive around until he got whatever he wanted.

To determine the routes by which we would get our planes overseas, Olds brought in Colonel Caleb V. Haynes, like himself one of aviation's most famous pilots. Haynes took off July 1, 1941, on the Command's first Transatlantic flight. In a B-24 roughly converted to a transport plane, he proceeded to Prestwick, Scotland, via Montreal and Gander, Newfoundland, and returned. The trip was made in complete secrecy. All members of the crew received the Distinguished Flying Cross. Within months such flights became routine.

Haynes also broke in our southern route via Brazil, thence over the narrowest point of the South Atlantic to Takoradi, on the Gold Coast. His copilot was a major named Curtis LeMay, now chief of staff of the United States Air Force.

In the meantime Olds was taking advantage of every opportunity to develop other airlanes. When two B-24's piloted by Major Alva T. Harvey and First Lieutenant Louis T. Reichers were sent to Moscow on a special mission, Olds took it on himself to bring them back home by diverse routes. Reichers flew south to Iraq, then across Africa to Takoradi. Harvey proceeded on around the world, via India, southeast Asia, Australia, New Guinea, Wake Island, and Hawaii. Thus our knowledge of the world was expanding, to be followed by the continual expansion and increase of our actual flying operations.

My job, originally, was getting pilots and crew members to fly the

steadily increasing number of planes to their destinations at home and abroad. A directive from the chief of the Air Corps, signed by Colonel George E. Stratemeyer, executive, concluded with the sentence: "Any deficiency of pilots for ferrying crews will be made up at present by the Army Air Corps, which includes all pilots of the Air Corps, including the GHQ." With this directive we could reach into any Air Corps command and pluck all the pilots we wanted. I attempted to fill our ranks with National Guard and Reserve pilots, to avoid disrupting other regular commands, but there just weren't enough. It became necessary to ask that pilots from tactical units be loaned to us.

Everything pertaining to those pilots and the pilots we already had and the training of new pilots was passing through my hands.

Saturday and Sunday I would spend at our special training school for four-engine crews at Albuquerque, New Mexico. The school was set up and administered by TWA, and I was the only Ferrying Command officer they saw. It was at this school that we developed crews to ferry the big beasts across the country, and eventually over the oceans.

The other five mornings a week began with a load of work that would take until midnight, not including the fantastic orders the Olds daily staff meeting usually produced. It was obvious that the Command was already too centralized. As Olds preferred to make the broad policy directives, working with the top levels of the government, rather than sit in this smelly basement office and be an administrator, just about every routine decision came to me.

In making one important decision I took a leaf from the boss's book. It involved a ridiculous situation which had been permitted to develop through lack of some central headquarters on the West Coast. Once their delivery had been made, pilots would report back to the same factory for another job. It frequently happened that at one factory pilots would be sitting around waiting for planes to come off the production line while at the same time planes would be ready and waiting at another factory with no pilots to fly them. What we needed was a base on the West Coast for the continuous cross-training and administration of these pilots, but I also knew that the last thing Olds wanted was a base to administer. After serving under him for just a few months, however, I absorbed some of his own methods, such as just going ahead and doing what seemed right. The opportunity arose the day Major General George

H. Brett, then acting Chief of the Air Corps, called from the West Coast. Olds was out and I took the call.

"You've got everything in a mess out here," the general roared. "You've got these pilots all scattered around and nobody knows who is doing what. They're not cross-trained, and they're just milling around."

"Yes, sir," I said. "If we could have the Long Beach Reserve base assigned to us then we could get all these pilots together under a commanding officer and a staff. That base is near all the factories, and we could set up a cross-training program. We could maintain some sense of co-ordination instead of having too few pilots at one place, too many at another."

"That's a good idea," the general said. "You've got the base."

When Colonel Olds came back, and I told him that he now had a base to oversee and how we got it, he became furious. But this was the only way we could possibly accomplish anything with any degree of efficiency. As it was, I worked twelve to fifteen hours a day, seven days a week. Two years after Pearl Harbor, Christmas Day, 1943, I took my first day off.

By December that first year, we had the semblance of a headquarters, and our pilots were flying planes in a steady procession to Montreal. But immediately after Pearl Harbor all ferrying stopped with a bang. Every pilot we had borrowed from any other unit, except the National Guard and Reserve, was ordered to return to his command, and to return immediately. On that day we had twenty airplanes actually en route across the country in the hands of regular tactical pilots. They were ordered to put the planes down at the nearest field and get themselves to their home base immediately. I was acting as executive officer of the Ferrying Command at that time (Alexander had gone to China for a month and didn't get back for two years) and I protested as strongly as I could, but without success. There was a great fear that the Japanese would keep coming, and a consequent rush to ship troops and airplanes to the West Coast to repel the invasion. Some of our pilots were on the West Coast or proceeding there when the orders came down, and they had to hurry in the wrong direction as a consequence. By the time many pilots ordered to the Coast arrived there, it had become obvious that there were no airplanes for them to fly. Pilots who had been grounded en route were then ordered to go back and complete the deliveries, but

after that the Ferrying Command was left with only the handful of pilots we had gotten from the National Guard and the Reserves.

It was obvious that the plane-ferrying business was in for a great expansion. We had to have pilots, but it was now obvious that we were not going to get them from the military. Fortunately, from my experience in Memphis I knew that there were many pilots, good pilots, out there in the civilian world. I had the idea that they would rather deliver planes for us than be drafted into the infantry. I put out word that we intended to hire as many civilian pilots as we could get, and then began negotiating with the Civil Service Bureau as to just how we were going to do it. The Bureau finally decided on a rating which would give a pilot three hundred dollars a month and six dollars per diem when he was away from home on a ferrying mission. Every man was taken in on a three months' trial arrangement; if at the end of that time it appeared that he was not going to work out, we sent him back to his home and draft board. Those who did work out were commissioned officers. Within six months after Pearl Harbor we had hired some thirty-five hundred civilian pilots for the Ferrying Command, of whom more than half were subsequently commissioned.

One of those who were not commissioned was the pilot who landed a B-26 he was ferrying at a field halfway to his final destination and went off and left it there with his parachute and flying clothes. The early B-26's had stubby wings, and a wing-tip stall with a resulting crash that was all too common. At any rate, he sent me this message: "I quit. The only thing you need to make this a flying coffin is six handles." I accepted his resignation, so notifying his draft board.

Our new men came from every walk of life. Olds loved to bring men of social standing and wealth into the command; one of his early recruits was Bruce Gimbel, who today is president of Saks Fifth Avenue. Gimbel was a pilot and a good one, but he had had to overcome the handicap of a crippled arm. When he went for his physical examination, the Air Corps doctor took one look at him and turned him down.

Olds hated to be thwarted in anything. He was determined that Gimbel come in with us, and he carried the case all the way to the chief flight surgeon, Major General David Grant.

"We need pilots, good pilots!" Olds thundered. "Here's a good pilot, and you won't let me have him."

After some shouting, General Grant finally agreed to go up in a plane with Gimbel to see if he could fly it. It was a huge four-engine Liberator, but Gimbel handled it masterfully. Grant came down shaking his head, and Gimbel passed his physical examination.

In addition to building up numbers, we were developing specific talents and know-how. We learned early that there was a particular and definite *expertise* required in delivering planes over long distances, an *expertise* requiring techniques and training over and above those necessary for the flying of combat missions. When General Douglas MacArthur, at the head of the beleaguered American forces in the Philippines, called for more bombers, some sixty or more, mostly B-17's, were assembled at Sacramento. Flying the Pacific was hardly safe, and it was determined to fly them over the southeastern route, across the South Atlantic to Africa, thence over the Middle African desert, Arabia and Asia to their eventual destination. Under orders of the Bomber Command, the planes began the transcontinental part of the trip on December 19, flying to Fort Worth, Jacksonville, and then McDill Field in Tampa. There officers of the Third Air Force took one look at the condition of the planes and crews, and wired Air Corps headquarters in Washington for help. By that time it was known that the Ferrying Command had had the only experience in transatlantic flying, and the matter eventually came to us. We immediately dispatched two of our experts, Major Roderick Towers and Lieutenant Reichers, whom I mentioned previously, down to find out what was wrong. Thanks to their specialized talents and knowledge they quickly found out—*everything* was wrong.

Most of the crews were very young, just out of school, and had little experience working together as crews; everybody distrusted everybody else, and with reason. The pilots had had only fifteen to twenty hours flying time in four-engine aircraft, with a commensurate lack of time in bad-weather flying, night landings, and take-offs. They had little—at most no—experience in instrument flying—I suppose they were to fly two-thirds of the way around the world, partly at night and through the bad weather they were bound to encounter, over routes known for only a few months, by visual flight rules. The crews didn't know where they were going, but they had an idea it was a long way off, and had consequently scrounged just about everything they could possibly need anywhere and loaded the junk on their planes. The only portable aircraft

scale in existence was packed up and flown to McDill Field. Every plane was weighed, and every plane was proved to be overloaded by some three thousand pounds on the average. Nor was the overload apportioned evenly throughout the compartments of each plane, but just stuffed in any place. Many planes were badly out of balance.

Towers and Reichers assembled maps and briefing materials, opened a postgraduate school for night and bad-weather flying, including landings and take-offs, and, of course, shook down the contents of every plane. All during this time the crew members were getting to know each other, building up that confidence in each other which is an essential part of team work.

Unfortunately these planes did not reach the Philippines in time. Some got as far as Java, others were held up along the way. Four crashed. No doubt many more would have had the same fate if either crews or planes had been permitted to take off in the condition in which they came to McDill Field. In any event, none would have reached the Philippines.

Unfortunately, the administration of the Ferrying Command was not keeping up with the increase in our knowledge and numbers. Late one night, pulling my once-a-week tour of duty as officer of the day, I began thinking of the problems we faced. They seemed insurmountable already, with just the few planes we were handling, and yet the President had publicly predicted that the number of planes produced by the American aviation industry would eventually reach fifty thousand a year.

We simply had to decentralize, I realized; we had to have some form of organization by which routine decisions could be made at a lower level instead of piling up in Washington—which meant me. I took pencil and paper and, in an hour or so, tore the command apart and put it back together again in a simple little chart, setting up a general headquarters, a domestic division, and a foreign division. I showed it to General Olds the next day. He grabbed it and put it into effect, with Major Thomas L. Mosely in charge of the foreign division, me commanding the domestic division. I had a total strength of 934—386 pilot officers and 548 enlisted men. We were rapidly building up specific talents and know-how.

Not every man has the opportunity to see in black and white just what an official historian thinks of him. It may be fitting here, then, to borrow a phrase, to stop and take a look at how Lieutenant Colonel Oliver

LaFarge, chief historian of the Air Transport Command, described me in his book on the ATC, *The Eagle in the Egg:*

> The Domestic Division was commanded by Lieutenant Colonel William H. Tunner, as he had now become. This was the beginning of the mission which was to lead him to general rank. Major General Tunner played so important a part in the Command's history that it is fitting to stop and take a look at him. An unusually handsome man, cold in his manner except with a few intimates, somewhat arrogant, brilliant, competent. He was the kind of officer whom a junior officer is well advised to salute when approaching his desk. His loyalty to the organization he commanded was notable, and so was his ability to maintain the morale of his men. The men of his Division held themselves to be somewhat apart from and above the rest of the Command; even after he had been transferred to India and many of them were scattered into other parts of the organization, they remained Tunner's men. He defended them against all comers, and was every whit as ready as General Olds to stand up against higher echelons when the welfare of his command was threatened. Air Transport Command Headquarters came to look upon him with a mixture of exasperation, admiration, and reliance. They wished he would mend his ways, be less independent, more willing to conform. Action to realize this wish was baffled by the frequency with which the non-conformist proved to be in the right.
>
> Tunner faced a fantastic problem . . .

Although both embarrassed and flattered by LaFarge's words, I do agree with him that Tunner faced a fantastic problem. It was, of course, the delivery of all the planes which were now pouring off the assembly lines. It was no longer a simple matter of picking up a plane at the factory and flying it to its final destination. By 1942, the necessity for modification of many types of planes had become paramount. Thus a plane destined for duty in one part of the world should be modified to meet climate conditions, combat conditions, or both.

The Air Materiel Command had learned that modifying the plane at the factory was too confusing. They thus set up modification centers to which aircraft would flow in from different factories. Sometimes a plane would have to be sent to more than one modification center, and then

on to a processing plant for final readiness for overseas. Careful scheduling and supervision were required to keep both planes and pilots moving.

Another factor was the great variety of planes, even before modification. During the course of the war our pilots were called upon to fly a total of some hundred and fifty different models. We could hardly expect our new pilots to step into four-engine planes and fly them over long distances on instruments. On the other hand, there were many types of planes which were far easier to fly, and it would be a waste of time and training to assign a pilot checked out on B-17's to a small, open-cockpit trainer. The problem answered itself. I set up a program of on-the-job training in which the pilots actually performed the mission of the Command at the same time they bettered their flying. Thus those at the bottom of the ladder would deliver the simplest forms of aircraft, such as artillery spotting planes and primary trainers. As they built up their flying time in these basic types, they would also be going to ground school and instrument-flying school, preparing themselves for the next step up. Gradually, step by step, they worked their way from short hops in trainers on clear days to delivering the largest aircraft all over the world.

All along I insisted on rigid standards of excellence. Occasionally some pressure was put on me to release pilots for more difficult planes before they were quite ready, but I always refused. I saw no reason for increasing the danger of losing either pilot or plane. Many other commands adopted the specifications I set up for my pilots.

We had six classifications of pilots, as follows:

Class I. Pilots qualified to fly low-powered single-engine planes.

Class II. Pilots qualified to fly twin-engine trainers and utility planes.

Class III. Pilots qualified to handle twin-engine cargo and medium transports, and on instruments.

Class IV. Twin-engine planes in advanced categories, such as medium bombers and heavy transports.

Class V. The biggest planes, four-engine bombers and transports and be able to deliver them overseas.

Class P. Single engine, high-performance pursuits or fighters. This was a special class because, although these fast and hard-to-handle planes certainly required more than average

> experience, the flying of fighters was not in itself of great experience value in working up to the big four-engine planes.

Through this method of training we were able to utilize our thousands of pilots of different skills on our many airplanes requiring different skills. Each pilot kept a card which showed his current rating.

In April, 1942, Colonel Harold L. George succeeded Bob Olds, now a brigadier general, as commanding officer of the Ferrying Command. General George—he received his first star soon after assuming command, and eventually became a lieutenant general—was a planner, a thinker, a strategist, a hard worker, and a good administrator as well. He had been one of that small group of dedicated Air Corps officers who had put their careers on the line and stuck with the disciple of strategic air power, General Billy Mitchell, back in the Twenties. General George had a firm and complete grasp of the entire concept of air power.

Under his command the organization expanded swiftly and smoothly. In June it became the Air Transport Command, with my new Ferrying Division now charged with all ferrying operations, domestic and foreign. Eventually, too, the Ferrying Division took over training of pilots for the entire ATC, and the operation of the express air transport services, through the foreign divisions of the ATC. I moved my headquarters to Cincinnati, Ohio.

As the Division grew, our pilots began to take on a certain personality of their own. Sure, those of us in the ATC were called "Allergic to Combat," "Army of Terrified Civilians," and other unpleasant, sometimes unprintable, epithets. It was always perfectly true that our ferry pilots were not combat pilots. Their very mission was different from that of the combat pilot. A combat pilot, whether at the controls of a four-engine bomber with a five-man crew helping out, or of a fighter blasting recklessly through the sky, is to inflict damage upon the enemy. The pilot is always expected to bring back the plane and the crew, but if he doesn't, well, you expect losses in combat. And a combat pilot who risks his life and his ship in order to inflict serious damage upon the enemy is a hero. He thinks nothing of calling upon his plane for everything it has to give. That's why the plane has it in the first place. In short, the

combat pilot is not supposed to be cautious, or conservative, or sparing of his ship.

But in the Ferrying Command we had to have different standards. The mission of our pilots was to move their planes along toward their ultimate destination, which for many planes was combat. Our pilots were not supposed to risk their lives or their ships, but to fly skillfully and safely and deliver those planes in good condition. The ferry pilot was not expected to be a hero, but just to do his job.

But sometimes just his job was enough. In the long overwater flights of up to twelve hours or more, the ferrying crews flew through all kinds of weather, through storms and constant overcast and below-zero temperatures, with the gray-green, oily sea waiting below if they should make the slightest mistake. Our navigators took these planes to pinpoints on the globe. Ascension Island in the South Atlantic, for example, is a thousand miles from anywhere, and it is tiny; just a mountain sticking out of the sea with its top knocked off and made into a landing field. As our pilots used to sing:

If I don't hit Ascension
My wife will get a pension.

Our pilots flew over the top of the world, over the Arctic, and over the roof of the world, as the Himalayas are called. They flew over vast deserts as well as over the oceans. In the deserts of North Africa the fine sand ate into the engines; in the equatorial rain forests excessive moisture brought on rot and rust.

The ferry pilot flew not only under constantly varying conditions, over widely different sections of the earth's surface, but he flew different types of planes as well. He'd set a big plane down on one runway in the morning, and take off in a pursuit ship with totally different characteristics from another runway that same afternoon. He might fly for a week or a month or a year from one fine airport in the continental United States to another, then suddenly find himself making a landing at night, with two Zeros on his tail, on a Chinese landing strip. He might fly two thousand miles, king of the cockpit, master of the ship, then come home as just another tired passenger in a canvas seat on a slow but reliable Douglas C-47, tossing and pitching for hour on hour through the sky. He ate

when he could and he slept when he could. And if and when he finally got back to a base for any length of time, we promptly threw him in training school. This was no breeze, either, and he knew it. For going to sleep at the wrong time in one of those classes might mean death when the subject was brought up again at ten thousand feet over the Greenland Icecap.

Our ferry pilot was by no means a drudge; he could wear his hat as sloppy as any fighter pilot. Many men had nowhere to spend their salaries, and they played poker for high stakes. They got into, and out of, scrapes in dives and quarters and districts all over the world. They were not all angels. But they did know how to fly airplanes, and fly them safely and securely so they could arrive at their destination with a plane well cared for and ready for action.

We tried to get and train, and keep pilots capable of the highest possible performance. One of my duties was to provide the best possible working conditions, and the highest quality maintenance in return. We did not want to lose either men or planes. Whenever we had an accident, particularly a bad one, I wanted to know what had gone wrong in order to do all humanly possible to keep it from going wrong again. I received reports on hundreds of accidents, often from the survivors in person.

Just about everybody in America, I'm sure, knew about the crash of one of our planes in the Pacific with Colonel Eddie Rickenbacker, the World War I ace and former Chairman of the Board of Eastern Airlines, aboard. Rickenbacker, with his military aide, Colonel Hans Adamson, was on a secret mission in the Pacific for the War Department, and we were asked to provide transportation. They proceeded to Hickam Field, Oahu, without mishap. Then we assigned them to another plane, a B-17. The crew consisted of Captain William T. Cherry, Jr., pilot; Second Lieutenant James C. Whittaker, copilot; Second Lieutenant John J. DeAngelis, navigator; Staff Sergeant James W. Reynolds, radio operator, and Private John Bartek, engineer. It was a good crew. Cherry, a Texan with a drawl, had come into the Ferrying Command from the civilian airlines; he'd been a pilot for American Airlines. Whittaker was forty-one, an old-timer who'd been flying his own plane for years.

The plane had one other passenger, Sergeant Alex Kaczmarczyk, on his way back to join his outfit after having been hospitalized with a severe case of jaundice for over six weeks. Shortly after ten o'clock on

the night of October 19, 1942, Cherry completed his standard pre-take-off routine and started the big plane down the runway. Suddenly one of the wheels locked. Cherry did a masterful job of keeping the big ship under control, and no one was injured. But the ship was in no shape to continue; a new Flying Fortress was turned over to the party, and they transferred their gear. One of the items which probably should not have been taken aboard the new ship was DeAngelis' octant, the optical instrument used in celestial navigation. The instrument had taken a severe knock, but DeAngelis inspected it carefully and decided that it had not been damaged. The desire not to hold up Rickenbacker any longer may have had some influence on his decision.

This time Cherry took off without incident, and pointed the nose of the plane on the compass heading DeAngelis gave him. Just before dawn DeAngelis reported the ship to be right on course. The plane droned on; the Pacific beneath was obscured by an overcast. As the estimated time of arrival neared, Cherry brought the plane down through the overcast. There was no land in sight. The radio direction finder suddenly refused to work. The plane was lost, with fuel enough for about four more hours of flight.

Four hours later there was still no land in sight. The Pacific that day was not so pacific, with high seas running, but there was no recourse but to set the plane down. Rickenbacker took over the landing preparations and had everybody except the two pilots and the radio operator lie down on the floor, feet first and braced against the bulkhead. Cherry came down in a shallow glide, crosswind, between the waves. Just before the plane hit, he pulled the nose up, hooking the tail in the water. The big plane came to a dead stop within ten yards, with no injuries to anyone. Again Cherry had done a masterful job.

Working smoothly together, passengers and crew broke out the two five-place rubber rafts and the small three-man raft. All three were inflated easily, with carbon dioxide gas. Quite a bit of thought had gone into these rafts, but from the beginning it seemed that the designers had apparently had pygmies in mind. Rickenbacker, Adamson, and Bartek were assigned to one of the five-place rafts; Cherry, Whittaker, and Reynolds to the second, and DeAngelis and Kaczmarczyk to the three-place doughnut. The two men in the small raft quickly found that their only possible position was to sit facing each other with each man's legs

over the other man's shoulders. In the two larger rafts the seating situation was almost as ridiculous.

There had been emergency rations on the plane, but the man delegated to that detail had failed. The only food brought off consisted of four oranges.

As the days went on, and the men grew weaker and weaker, the nights grew colder and colder. There was no way to escape the constant spray, which kept them soaking wet, yet there was no water to drink. During the day they were beneath the tropical sun, which blazed down on them from directly overhead. Their clothes rotted away. The salt water ate into their skin, raising ulcers. And so it went, day after day after day. The greatest event was the rain squall which enabled them to live. The tragedy was the death of Kaczmarczyk.

Day after day after day, for a full three weeks. They were weakened shells of themselves. When Whittaker's raft finally drifted upon the beach of a coconut island, he fell down eight straight times until he was finally able to stand erect, with the aid of an oar. The seven survivors were eventually gotten to hospitals and brought back to strength and health, and the episode was all over as far as the public was concerned. But not in my headquarters. I interviewed Cherry and Whittaker carefully, and steps were taken to avoid a similar episode. Cherry was assigned by ATC to work with the designers of a new model raft. Mandatory instructions were issued on preflight inspections of all survival equipment and supplies, as well as a preflight inspection of the octant to be used.

A young lieutenant named Joe C. DeBona told me of his experiences on a nightmare island in the mouth of the Amazon River. DeBona was the pilot of one of sixteen P-38's to be ferried from Long Beach to Oran, North Africa. So that the pursuits could avoid instrument flying, a B-24 led the pack by some five hundred miles, radioing back the flight conditions—weather, ceiling, visibility. The newly installed photographic equipment took up all the available space in the plane, so another B-24 followed the flight with the luggage of the sixteen pilots, plus life rafts and survival equipment. This second B-24 was piloted by Major Andrew Cannon, the deputy commander of the Sixth Ferrying Group; it was to be my pleasure to hear and see a lot more of Andy Cannon as the years went by.

The route led from Long Beach to Miami, Puerto Rico, Trinidad,

Dutch Guiana, Belém and Natal in Brazil, Ascension Island, Monrovia, Marrakech, and Oran. The flight proceeded without mishap to Dutch Guiana. Between there and Belém the weather was completely overcast, as it usually is over this stretch of dense jungle, and the P-38's had to climb to twenty-eight thousand feet to get over the clouds. That's where DeBona was, five miles over the very worst part of the Amazon jungle, when both engines went out at once. We'll never know for certain just exactly what happened to the engines, but everything points to a failure in the fuel system, probably some kind of vapor lock. As the flight paralleled the coast line, DeBona had no idea whether he was over land or water, and decided to ride his plane down rather than jump. It turned out to be a wise decision. He came out of the clouds at five hundred feet and found himself over a hellish combination of jungle, marsh, swamp, and water; it was the north side of the mouth of the Amazon. He managed to set the plane down in a swampy area on an island. Though unhurt, he certainly wasn't going anywhere. He was surrounded by brackish water and crocodiles. High ground abounded in snakes, ants, and ticks. The ticks, DeBona assured me, looked like snails and bit with both ends. At night every beast in the jungle came out to hunt.

"It was kill or be killed," DeBona said. "The growl of the predator, the scream of the prey—it went on all night."

He stayed in the cockpit of the plane, hoping we'd get him before the beasts did.

In the meantime the word was out to be on the lookout for him. Andy Cannon had gotten involved in a serious controversy over the lost plane. On arrival at the base in Belém he had quite rightly insisted that the search and rescue section begin its work immediately. There were two Navy PBY flying boats available for the mission, but at the time there was no pilot on the base to fly them. Cannon was fully experienced on PBY's—he had delivered two of them to the Panama Canal Zone—and he immediately volunteered to take one out on the search.

The base commander was faced with a dilemma. His orders were to expedite this movement of pursuit planes urgently needed in the fight for North Africa. To let Cannon go on the search would delay them—and also his own PBY pilots might come along any time. He ordered Cannon to proceed with the ferrying mission.

I didn't know of this controversy, but I did know that DeBona was

down, and I wanted him rescued. Every plane flying over that area had orders to look out for him. Finally, after several days, the crew of a B-24 being ferried saw one of his flares, went down and circled the downed plane to reassure him, and then proceeded on to Belém with the exact spot marked on the chart. Natives were contacted, and they went in to get him. Joe was suffering from exposure and hunger, but he was otherwise in good shape. It was a good thing, too, because the rescue sounded like one of those things in which the cure was as bad as the disease. The natives literally dragged him out of there. They went in with a special team of oxen, and Joe came out hanging on to the tail of one of the beasts as the alligators and snakes scattered. Joe wound up with a galloping case of malaria, but he was safe and alive, and that was what counted.

Shortly after I learned from DeBona about those double duty ticks in the jungle, one ferry pilot came in to tell me about the Arctic. He and his small crew, in a two-engine transport, had crashed while flying the northern route to England and before the ATC Northern Division got them out of there, they'd become expert architects on snow houses.

The pilot told of a strange phenomenon which he described as "flying in milk" or "white-out." The snow is white beneath and the sky is white above, and there is no line of demarkation, there is no horizon. There is no way of telling, by the eye alone, whether you are ten feet over the snow or ten thousand. It is not a fog, as the wings of the plane are clearly visible, and often the sun is shining through. His accident was freakish indeed. Thinking himself well beyond Greenland and over the frozen sea, he let down to five thousand feet and banked his transport for a minor change in direction. His bewilderment must have been something to behold when his left wing, which he was watching, touched something solid. It was the top of the icecap which covers Greenland. He was only two miles from the coast—but the wrong side. The accident required a large expedition and several weeks to get him and the crew out but led to greater knowledge of the Arctic and careful briefings of following crews. A full-scale rescue operation was maintained on the route permanently from then on.

The greatest continuing hassle in the Ferrying Division, one which caused ripples of anger, frustration, and indignation still occasionally being heard from today, began in a moment's chitchat at the water cooler. One of our officers, Major Robert M. Love, later deputy com-

mander of ATC, was catching a drink at the same time as I, and he audibly hoped that his wife had gotten to work all right that morning. Turned out that the Loves were living in Washington, but Mrs. Love was commuting to her job in Baltimore *by plane.*

"Good Lord," I said, "I'm combing the woods for pilots, and here's one right under my nose. Are there many more women like your wife?"

"Why don't you ask her?" he said, and a meeting was arranged right then and there.

Nancy Harkness Love turned out to be an important individual, and she was a fine pilot. She had started flying when she was sixteen, and as a flying student at Vassar College had helped start student flying clubs at other colleges. She had received her commercial license while still in her teens, and after graduation had handled a special job for the Bureau of Air Commerce. Then she married Bob Love, who had an aircraft agency and a small airline in Boston, and worked with him in both the business end and in delivering planes to customers. When Bob was called to active duty, Nancy came to Washington with him. She was not only an excellent pilot with 1,200 hours of flying time, but was also experienced in organization and administration. And she proved that a woman could be both attractive and efficiently dependable at the same time.

At our first meeting she assured me that there were already hundreds of women who were proven, capable pilots, and thousands more who'd leap at the chance to become flyers. We immediately set about making plans for a women's flying corps.

We did not know that the utilization of women pilots had already been proposed and rejected. As I learned later, Jacqueline Cochran, the famous aviatrix who had established speed records in transcontinental flying, had visited President Roosevelt at his Hyde Park estate and had come away with a note personally signed by the President introducing her and her ideas for women's participation in the Air Corps to General Arnold. She prepared a long memorandum giving many good reasons for the utilization of women pilots and proposing the establishment of a rather grandiose women's military organization for the signature of General Brett, who then passed it on to General Arnold. I don't know why, but General Arnold disapproved it.

Unaware of this previous effort, Mrs. Love and I prepared a lengthy memorandum proposing a complete program for acquiring, training, and

using women pilots. Our plan was less grandiose than Miss Cochran's, and probably prepared in a simpler and military manner. I signed it and sent it off to General George. By this later time we needed pilots, any pilots, badly. I was so sure that the proposal would be accepted that on the same day I went to Wilmington, Delaware, headquarters of my Second Ferrying Group, to make arrangements for housing the women we hoped to get.

General George in the meantime got verbal approval from General Arnold's staff, and official announcement was made over the signature of the Secretary of War. It turned out we could not commission women pilots in the Armed Forces, as we had originally intended, but we did work out a plan with civil service by which they were to be paid two hundred fifty dollars a month (fifty dollars less than the men), with six dollars per diem allowance when away from their station.

Some of our first applicants were real lulus. So many crackpots descended on us and there were so many requests for further information that I sent a memorandum to the War Department Bureau of Public Relations, asking them please not to put out any more publicity on the matter.

But applications also came in from the people we wanted, fine women with solid flying experience. Out of our first squadron of twenty-five pilots, twenty-one were not only professional fliers but instructors. The first pilot to qualify after Mrs. Love was Mrs. Betty Hyler Gillies, who had a total of 1,400 hours of flying time. One girl, Evelyn Sharp, came to us with 2,950 hours; she'd been a flying barnstormer.

Members of the Women's Auxiliary Ferrying Squadron, WAFS, began delivering planes in the fall of 1942. The press went for the idea in a big way, and with the publicity spotlight on them, our women pilots had to conduct themselves in such a manner that not a single breath of scandal could be directed against them. At first the regulations were stringent, such as those which attempted to reduce their contact with male pilots to the barest minimum. Eventually the regulations were relaxed, and men and women actually flew planes together. But at the beginning, the girls were heavily chaperoned.

As our program progressed, Miss Cochran appeared again, this time with the title of Director of Women Pilots in Air Corps headquarters in Washington. She had the name changed from WAFS to WASP's, for

Women Auxiliary Service Pilots. She soon had some of them performing other flying duties than ferrying planes; one carefully chosen group of brave young women towed aerial targets for anti-aircraft practice. Others flew slow time after engine change or overhaul.

Most of her women pilots, however, ferried planes, and advanced in the same sequence of training as the men. A few, including Mrs. Love and Mrs. Gillies, were even checked out on four-engine bombers and delivered several of them from the factories. Some 117 became proficient in our fast fighter planes. One woman delivered five pursuit planes in four days, each a distance of more than two thousand miles.

Despite our most rigorous controls, we still had a handful of cowboys among our male pilots. When we began experiencing a high degree of accidents in the deliveries of P-39's, most of them of such seriousness that the pilot was killed and the plane a complete washout, I put the cause down primarily as pilot failure. Sure, the P-39 was a hot ship, all right, but it was perfectly safe if it was flown according to specifications. It was plainly written in the literature on the plane, and constantly called to the attention of pilots assigned to it, that this airplane needed speed, at least 150 miles per hour, to maneuver. It had the glide angle of a brick, and before adequate baffles were placed in the tanks, gas sloshing around didn't help any. But, nevertheless, there was no necessity whatsover for the most common type of accident hurting and even killing our pilots and completely wrecking our planes. These accidents occurred when the plane got out of control on the very first turn after taking off, or the last turn coming in. The reason was obvious. On take-off, pilots would put the plane into a steep bank before reaching the required speed; on landing, they'd reduce speed too much before making the last turn. But anyone who had read the specifications and characteristics of the plane —and they were quite plain and clear—knew that it would go into a high-speed stall under such conditions.

As a result of these accidents, we were getting a lot of static from pilots who claimed the P-39 to be a flying coffin. Our women in the meantime had proved themselves as ferry pilots. They paid attention in class, and they read the characteristics and specifications of the plane they were to fly before they flew it. The solution of the P-39 problem was a natural one, therefore. With no doubts whatsoever, I had a group of girls checked out on P-39's and assigned them to make P-39 deliveries.

They had no trouble, none at all. And I had no more complaints from the men.

When we began getting similar static from pilots objecting to ferrying B-17's over the North Atlantic to the United Kingdom, I attempted the same solution. These flights had become almost routine, and there was no reason for complaint; I decided to let a couple of our girls show them just how easy it really was. Our number one and number two pilots, Nancy Love and Betty Gillies, leaped at the chance to be the first women to ferry a plane overseas. We had scheduled a blitz movement of two hundred B-17's to go over, and I assigned the two women to one of those planes. With three additional crew members, all men, Mrs. Love and Mrs. Gillies flew their assigned Fortress from Cincinnati to New Castle, La Guardia Field in New York, Presque Isle, where they received final briefing and clearance, and Goose Bay, Labrador, the last stop before flying the Atlantic. The trip was uneventful, even though they had to fly on instruments most of the way. The weather was bad at Goose Bay, and the big hop across the Atlantic was delayed.

In the meantime, at what I had planned to be the last minute, I notified C. R. Smith, General George's deputy at ATC headquarters, of the impending flight. He in turn sent a message off to Brigadier General Paul Burrows, commander of the ATC European Wing, to the effect that a B-17 was en route piloted by two WASP's. The message was handed to General Burrows at dinner, and by coincidence General Burrows' dinner guest that night was, of all people, General Arnold. I don't imagine dinner was too social after that, for General Arnold apparently hit the ceiling. He promptly radioed a message to hold the plane, and from then on to permit women to fly only in domestic service.

His message arrived at Goose Bay the moment the plane was originally scheduled to take off. At the time, however, it was sitting at the end of the runway, Mrs. Love and Mrs. Gillies in it, waiting out a fifteen-minute delay. The commanding officer of the base put on his coat and took the message out to them. They did not make the flight.

Though no WASP-piloted overseas flight was ever made, the women did a magnificent job at home. They freed many men for overseas deliveries. When several women had worked up to the point where they were checked out on the most difficult of all ships, the pursuits, we stationed a detachment at the Republic Company on Long Island to fly

P-47's from the factory to the first processing station. During the year and a half they were assigned there, they brought two thousand P-47's away from the factory. No men were needed there at all. By the end of September, 1944, WASP's were delivering three-fifths of all pursuit ships.

Every big bomber and every cargo plane flown by women pilots was safely delivered. In all, they delivered 12,652 planes, with only three fatal accidents. Their accident rate was lower than the men's. Yet the most we ever had was 303 WASP's; we had at the same time eight thousand male ferrying pilots.

I had moved on from the Ferrying Command when the steps leading to the demise of the organization began, in the fall of 1944. The fact that they had not been commissioned as officers still rankled some of their number, and the National Association of Women Pilots started a letter-writing campaign appealing to Congress to give the girls their commissions. All of us who knew the WASP's thought they deserved it. But apparently both Congress and the press thought this to be high-pressure lobbying; at any rate, the campaign backfired.

About this time Miss Cochran recommended that General Arnold either give the girls a military status or discontinue the program entirely. I suppose that General Arnold, with far more important problems to worry about, was sick of the whole thing. At any rate, he took Miss Cochran up on her proposal and inactivated the program effective December 20, 1944.

The two-year existence of the WAF-WASP coincided with the period of the Ferrying Division's greatest growth. During 1943 the general operations of the division increased by astronomical figures. In our second full year as the Ferrying Division, from June, 1942 to June, 1943, we delivered 3,609 planes to foreign destinations, completed 54,947 domestic movements, flew a total of some 75,000,000 miles. In the next twelve-month period we delivered 12,500 planes overseas, 110,000 domestically.

The first summer of the war, we set up the route from Great Falls, Montana, to Fairbanks, Alaska, by which five thousand planes were delivered to our then ally, Russia. Then three separate foreign transport runs, each regularly scheduled, were begun—the Fireball to India via the South Atlantic, the Crescent to India via the Azores, and the Snowball to the United Kingdom over the North Atlantic. We also set up sev-

eral domestic routes, crisscrossing the nation to carry supplies and move ferrying crews. If the first year is the hardest in airline operation our records did not show it. On the first anniversary of the Fireball, for example, we had flown seven million miles, averaging 125 ocean crossings and subsequent flights to India a month, without injury to a single passenger. One of the pilots on this run, incidentally, was a young officer from Arizona named Barry Goldwater. The Crescent, with twenty C-54's in constant service, covered ten million miles that first year without a fatality. That was my first good look at this new four-engine plane, known to civilians as the DC-4. Its combination of big payload and Douglas dependability couldn't help but impress anyone who looked at the records. I was to see a great deal more of C-54's in the next several years, and at my specific request.

On the Crescent run, incidentally, I'd set up a pony-express type of operation, with fresh crews taking over at specific points. The plane itself went straight through, from America to its final destination, without the delaying transfer of passengers or cargo.

Actually our first passengers as such were wounded paratroopers, whom we returned to the States from the combat zones. At first the medical department was far from co-operative with our first efforts at air evacuation of the wounded. Finally the ATC just went ahead and loaded some wounded soldiers on a United States–bound plane without specific authorization. It just made sense that these men would get better treatment and recuperate faster here in the good old United States than in military hospitals far, far from home, and we had planes returning empty in which they could ride. After we did it the first time, with splendid results, it became easier to get permission to do it. Apparently the first nurse to serve on such a flight was a girl who had never been in a plane before, but as we went along, the operation became more and more standardized. A flight surgeon would check the patients out as capable of flying, and to each plane a crew of a nurse and a male attendant would be attached. From that small, highly irregular beginning, the air-evacuation program built up to the point where in May, 1945, the biggest month, 18,537 soldiers and sailors, airmen and Marines, were flown back to the States for medical treatment.

Our system of training pilots for the Ferrying Division must have evidenced some degree of success, for in October, 1943 the Division was

given the responsibility of training all pilots for the Air Transport Command. By the end of the war, over fifteen thousand pilots had moved through our transitional training schools.

I could fill this chapter with figures and statistics—number of miles flown, planes delivered, passengers and tons of cargo transported, *ad nauseam*. More important, I believe, are two new concepts born in the old Ferrying Command, carried on through the Ferrying Division, and still very much in operation in the Air Force today.

The first of these was the development of a highly professional staff of officers devoted to military air transport. Everything I accomplished as commander was carried out through the eager and industrious men who served on my staff. Before the Ferrying Command and the ATC, commanding officers of aviation units had as a matter of course relegated what little air transport there was to some subordinate officer or section. Though great in their own field—combat—these commanders cared little and thought less about transport; to them it was something anybody could do. My staff, on the other hand, composed of carefully selected, intelligent men, and encouraged to think creatively, constantly came up with new ideas, new methods of carrying out our over-all mission. We proved that air transport is a science in itself; to be carried out at its maximum efficiency air transport must be run by men who know the techniques of air transport and who are dedicated to air transport—*professionals!*

Even greater, I believe, paramount over every other accomplishment, was the early organization and installation of the Flying Safety program in the Ferrying Command. The idea immediately started spreading to other commands, and today the United States Air Forces has its Flying Safety Command.

The basic idea of the Flying Safety program had begun during long talks with my brother George, an executive with the Travelers Insurance Company. I was particularly interested in his description of a special inspection system maintained by large insurance companies. When such a company insures an industrial plant or facility, for example, it sends an expert or group of experts to inspect the property fully, with special emphasis on potential sources of danger, such as elevators and steam boilers. The company's interest in possible trouble spots does not end when the policy is signed. Rather, it is continuous, with the insurance

company's experts making regular inspections of the insured facility's equipment as well as its accident and fire prevention programs.

If an insurance company found it profitable to go to the trouble and expense of making its own inspection of a boiler or a warehouse, I thought, then surely the Air Corps would find it profitable to make a similar additional inspection of expensive equipment to which the lives of Americans would be entrusted. I called in one of my officers, Captain (Bill) Walters, who in civilian life was involved in this facet of the insurance business, and asked him to start setting up a program in the Ferrying Division similar to this industrial insurance inspection, under the name of Flying Safety. Our inspectors were called flying safety officers and their small units flying safety sections. Each echelon of command had its flying safety section. Their job was to prevent accidents by continually reviewing the procedures of other departments, but when an accident did occur, flying safety committees were formed to determine and review the causes and to recommend future action to be taken to prevent repetition.

This flying safety activity, born of big business, became big business in itself as the war went on, and bigger still, both in the Air Force and civilian airlines, after the war was over. Today a single accident, in Air Force or airline, is cause for the most thorough and minute investigation and analysis of every facet of the aircraft itself—structure, engines, accessories, weight and balance, the crew, every activity of each member; communications and air traffic control—indeed, every conceivable detail which could in the most remote way be a contributing cause to the accident or even shed some light on a possible contributing cause. All this is done to fix the responsibility and to prevent that type of accident from ever happening again.

There was no such thing as a flying safety program before that modest beginning early in 1942. World War II is history now, and so are those fabulous statistics of thousands of pilots moving hundreds of thousands of planes over millions on millions of miles. But the flying safety program lives on, preventing accidents and saving lives today and tomorrow as well as yesterday.

CHAPTER III

The Hump

As I came in for a landing at the Chabua base, far up the Brahmaputra River in Upper Assam, that day in early August, 1944, I could hardly fail to see the huge black blotches at the end of the runway. I knew too well what they were. Each was a lasting memorial to a group of American airmen, the crew of the plane that had crashed and burned at that spot. If I had needed a reminder of my purpose in coming to this base, those burned spots would have served the purpose well. For it was my intention to take a plane of the identical type that had made those ineradicable blemishes, and pilot it myself over the Himalaya Mountains into China.

I knew, of course, that flying the Hump was considered as hazardous as flying a combat mission over Germany; one of the major reasons for my being sent to this God-forsaken area was to reduce the appalling accident rate. Still I looked forward with eagerness to the day's adventure. I was going to fly the Hump myself, not as a passenger with a veteran of the Hump at the controls, but as pilot. I was the new commander of this unprecedented operation at the ends of the earth. Before I could properly command it, I knew I had to fly it, fly it with my own hands on the controls, my own feet on the rudders, my own eyes on the instruments.

With me were my copilot, Lieutenant Colonel Red Forman, and my aide, Captain Dan Wheeler. I wanted them both to accompany me on the flight. Forman was destined to be chief pilot for the entire operation, and Wheeler would later serve as pilot of my plane, doing the actual flying while I would attend to my administrative duties. I could get a lot of this type of work done on these long flights. But all that was in the future. For this trip I intended to fly the plane myself.

We came in over the Assam tea gardens, touched down, and taxied up to the Operations Building. I climbed down and was met by the wing commander, Colonel Robert Baker, known as an able and tough operator. Like me, he was one of several officers who had been taken from important assignments in the Ferrying Division and sent here to the India-China Division. Like many other officers, he probably felt that he had been exiled. We did not waste time with effusive salutations.

"I want the first plane out of here for China," I told him bluntly.

He looked at me for a moment. "You're not checked out, sir," he said.

"Don't worry about that," I told him. "Just get me the next plane. Let's go to your office and talk about this."

In his office Baker picked up his phone, called Operations, and relayed the message that I wanted the first plane out. He listened a moment, then placed his hand over the mouthpiece and looked up at me. "The next plane will be ready in twenty minutes. But it's full of passengers. Wouldn't you prefer to—"

"No, I wouldn't," I interrupted. "Let the passengers remain as they are. Tell your Operations Officer that General Tunner will pilot the plane, and Lieutenant Colonel Forman will be copilot. Captain Wheeler will also go along."

Baker knew full well that not one of us had ever flown the Hump before. He plainly didn't like the idea of our violating the rule that a pilot would first go over with a man who was Hump-experienced before flying it himself. But I was determined that I was going over at the first opportunity, and this was it. I didn't want an experienced pilot with me because I felt I had to do it on my own. Anyway, Baker didn't have much choice. I got the plane.

From Baker's office the three of us went to the weather room, where I got what weather news there was. Inasmuch as we had no weather stations whatever on the Hump, our best source of weather information was the returning pilots who reported what they had flown through. That day, I learned, the weather on the Hump had been pretty good, at least up to an hour or so before. Generally clear, with scattered thunderstorms.

In the Operations room I was given some maps and a briefing—the route I would take and a description of unusual features of the terrain. One part of the briefing which made a particular impression on me was

the briefing officer's indication, on the map, of the rough location of each wrecked airplane I would fly over.

The plane waiting for us was a C-46, also known, and not affectionately, as "Ol' Dumbo," or the "Plumber's Nightmare." As in the case of any two-engine plane, when one engine failed, a 50-per-cent loss of power resulted. But the C-46's, at least the early ones, were particularly prone to engine failure. Like all other planes on the Hump, the C-46's were being used hard, flown without adequate maintenance, and always loaded to the maximum recommended by the factory. At its full load of forty-nine thousand pounds—crew, passengers, cargo, gasoline—this was a cumbersome beast that could cause anguish when it lost an engine. And a fine time for an engine to quit was when you were calling upon it to give all it had to get your extra-heavy plane off the ground. When one engine went out, the wing would automatically drop. The only thing you could do would be to put full power on the one remaining engine, and pray it would hold up. If you were already starting to make your turn, and were making it just a little too sharply, even full power on the remaining engine couldn't save you. The ship would stall, and a black spot at the end of the runway would be your memorial.

I had never flown a C-46 before, but I had been studying the technical orders on it for months. So had Red Forman and Dan Wheeler, and Red had made a short familiarization flight in one. We were all three conscientious pilots, not cowboys, and I felt no qualms about flying the C-46. We climbed aboard, and I went through the routine procedure. The engines sounded good as I revved them up, and I wasted no time worrying. If Baker had done his job properly, the plane was in flying condition no matter who was at the controls, brigadier general or second lieutenant. The heavy plane jounced and bounced as we picked up speed over the rough runway, but the engines were functioning sweetly, and they pulled us smoothly up into the air. The base, in the hot, steaming, fetid valley of the Brahmaputra, was less than one hundred feet above sea level, and we had mountains to cross.

My instructions were to climb at the rate of three hundred feet per minute, circling the airdrome twice to gain altitude, and then to proceed southeast on the course, over the Naga Hills, named for the tribe of head-hunters who lived in the uncharted area. To the north, behind us across the valley, were the Mishmi Hills, whose tribal namesakes were

not head-hunters—just mean and treacherous. Both groups of "hills" would tower over any mountains east of the Mississippi, but neither was as high as the Patkai Range, an abrupt wall of mountains almost two miles high, which rose directly to the east of Chabua. We flew over the Naga Hills to the valley of the Upper Chindwin, in Burma. It was down this steaming valley, but farther to the south, that General Joseph W. "Vinegar Joe" Stilwell led his troops out of Burma.

I nudged Red, pointed below, and gave him this bit of information. He looked down for several moments.

"I don't see any signs of any troops passing by there," he said. "No abandoned trucks, no nothin'. Just jungle."

It was true. There was nothing below us but river and jungle, green, thick jungle. We were out of civilization entirely, even civilization as existed in the sprawling Indian villages in the valley behind us. Beneath us now the solid carpet of green was unbroken by any sign of life or human habitation.

"My God," I said, "where are the people? Ten minutes ago they were everywhere—now there's nobody."

Beneath the upper crust of lush, dense foliage was the perpetual shade and gloom of the jungle floor. We had lost planes all through this area, and had never again heard from many of the crews and passengers. Perhaps they had perished in the crash. If they had parachuted out, they may have been caught in the treetops, or injured in the fall to earth. They could have been injured, and starved to death. They could have wandered aimlessly in the dense undergrowth until they dropped with exhaustion. They could have been found by native tribes, and been mistreated, murdered, or turned over to the Japanese. On this bright, sunshiny day, from our altitude of over fifteen thousand feet, the green carpet below did not seem so forbidding. But flying over it at night, or in the monsoon season, with the clouds billowing in from the Indian Ocean, or in the spring, with thunderheads towering high over the highest mountains, with buffeting winds and severe vertical currents, with ice getting thicker and thicker on the wings, its weight pulling you down—then thoughts of the unseen jungle below could easily build up to produce panic. There were constant reminders below of what had already happened to hundreds of Americans, and what could happen to us. For this was the aluminum trail; in this strip of ugly terrain 550 miles long

by, at that time, only 50 miles wide, over four hundred planes had already gone down. The dense growth had crept over those that had crashed in the jungle, which extended over the valleys and far up the mountainside. But above ten thousand feet the growth was sparse and scraggly, and above sixteen thousand feet even that disappeared, and the crags were brown and bare and ugly, with an occasional patch of snow.

"Hey," Red cried, "there's one of those crashes!"

Ahead, on the barren mountain, was the gleam of aluminum, all that was left of an American plane. I consulted the map and found the downed plane on it.

"It's a C-87," I said. "Went down over a year ago."

From then on, above the tree line, we saw others. We checked each one against the vague notations on the maps. None seemed new.

We had crossed the Chindwin Valley, making a twenty-degree bend to the east in accordance with our instructions, and the Kumon Mountains on its eastern border. Now came another broad valley with two yellow streams, the west fork and the east fork of the Irrawaddy. The two flow together at Myitkyina, pronounced Mish-in-naw, to form the Irrawaddy, and flow on to Mandalay, where, according to Kipling, the flying fishes play.

Ahead of us now was still another mountain range, like all the others running north and south, and then came the dark-brown Salween River, just over the border in Western China, pouring down its fantastic gorge, snaking through the mountains. We were now just about an hour out of Chabua. After climbing steadily at the rate of three hundred feet per minute all the way, we had finally reached our altitude of eighteen thousand feet. I leveled off, and our speed increased from 145 miles per hour climbing speed to 180 miles. We'd come about 125 miles.

Each successive range had towered fourteen to sixteen thousand feet. After the Salween River rose the highest peaks of all, those of the Santsung Mountains—known to all American pilots as "The Rockpile." This was the main range of the Himalayas, pushing down from the great mysterious region of snow-covered peaks to the north; this was the backbone of the Hump. To the south the altitudes steadily declined until it was safe to cross over at an altitude of sixteen thousand feet, but in that direction were more and more Japanese.

"Might be some Jap patrols down there," I said to Red as we crossed the Irrawaddy Valley.

He shrugged. "They probably can't see us any better than we can see them," he said, and obviously dismissed the whole subject from his mind.

But those patrols, invisible or not, were still responsible for our route that day. It was a compromise. Though it crossed some Japanese-held territory, it still avoided the even greater altitude of the peaks to the north. I could see them to the left, awesome snow-capped ridges. Of course, I'd be coming back over those higher mountains to the north, I suddenly realized. Naturally, the empty, lighter planes would come back by the high road.

Those ahead, rocky, barren, ugly, and threatening, were high enough. On a clear day we could cross them at eighteen thousand feet. Had the weather been bad, I would have climbed to a minimum of twenty thousand feet. Yet even today, flying at the safest minimum altitude, I was the better part of a mile higher than the top of some of our familiar American mountains, like Pike's Peak. The air was thin and cold, the oxygen mask was biting into my nose, and my feet were freezing. An hour before I had been soaking wet with perspiration.

On the eastern side of the Santsung Mountains the red Mekong poured down another great gorge like that of the Salween. Each, at least from the air, seemed fully as awe-inspiring as the Grand Canyon of the Colorado. Salween, Mekong, and both branches of the Irrawaddy were alike in that they flowed through deep, narrow gorges winding through the green jungle. If we went down we'd have to cross those gorges on foot, because to go north was out of the question, and to go south would be to walk into the arms of the Japanese. What a lousy thought, to go down in that rugged green hell below. You were doomed!

Though still inhospitable-looking, the mountains became less jagged. Finally, there were signs of people again, more and more people. I suddenly realized that the area I had flown over, from the Naga Hills range to the Mekong, though lying between two of the world's most heavily populated areas, had been completely desolate. Now, as we could see Tali Mountain in the distance, with Lake Tali at its foot, there were signs of human habitation beneath us everywhere. The mountainsides were terraced to make rice paddies, with tiers broad and narrow extending from the very tip of the peaks down to their bases. I tried to count

the tiers of rice paddies on one mountain. When I got to one hundred I gave up. Some of them didn't look to be over two feet wide, yet there they were, all diked and dammed, and green with growing rice. They perched on the sides of the steepest slopes, clung precariously in the most unlikely places. As more and more villages dotted the landscape, the reason for cultivating these most unlikely plots became self-evident; to feed this teeming population every possible square foot of soil must be pressed into service. Approaching Kunming, the eastern terminal of the flight that day, I saw by far the most impressive evidence of the multitudes that have peopled this ageless land. It was a graveyard, and even at our airspeed of some 180 statute miles per hour, we were over it for a matter of minutes. I learned later that it was eleven miles long.

But I couldn't get that vast desolate area out of my mind. Why that void? Had it been some pestilence which had wiped out the population? Had war between India and China created a no-man's land? I never found out. It's still a mystery.

The elevation at Kunming is some six thousand feet, and the drop is not so pronounced as at the other end of the line. We landed on a runway of gravel, which had been broken out of its quarry by sledges, chipped down to size by hand hammers, transported to this site by hand in small baskets, and then laboriously spread by hand. Thousands on thousands of Chinese working with only the rudest of equipment had leveled this runway, then covered it with hand-crushed stone and rolled it with hand-pulled rollers—two hundred men to a roller. It was rough, bumpy, and hard on tires, but it was a runway, and I brought the C-46 down on it. I had flown the Hump—550 miles in three hours and twenty minutes.

And what was the reward? *Eggis! Flied Eggis,* as the Chinese waiters called them. Real, honest-to-God eggs, not powdered, but fresh, fried in butter, and worth a little jaunt over Japanese and jungles any old day.

Then a brief visit to Operations, briefing for the trip home to Chabua, and we were off. The plane was lighter, and though we crossed the Rockpile at twenty thousand feet, the return trip took less time.

But still, when I returned Baker's plane to him later that day, I was stiff and sore and fatigued from the flight and its accompanying tension. And this had been an uneventful trip in daylight hours in perfect weather. I tried to put myself in the flight jacket of a young pilot fighting the con-

trols of a beat-up Ol' Dumbo bucking and jumping in a storm over the Himalayas, a pilot sent out under *my* orders, *my* authority, *my* responsibility. The picture was clearer now. My flight, foolhardy though it may have appeared, had given me that insight I needed, an understanding I could have gotten in no other way. Though tired and tense, I was glad that I had done it.

"Well," I told Red and Dan, "we've flown the Hump. Any question as to where we go now?"

There was none. One thing every pilot, gold bar or silver star, who'd flown the Hump knew—each round trip paid off in liquid gold. We went to the Operations office for debriefing, after which each of us was presented with a slip. Then it was to the dispensary, to turn that slip in for two ounces of whiskey. It was supposed to be drunk then and there, but some pilots saved up their slips for a binge, some nondrinkers gave them away or sold them—illegally, of course. But to me, that evening, those two ounces were just right. Old Crow—I'll never forget it.

"Here's to the Hump," I said, and Red and Dan clinked their glasses against mine. "The Hump and our first free drink on Uncle Sugar!"

Though my flight that day ended in a dispensary in Chabua, it had its beginnings three months before, halfway around the world in Washington. I had been summoned to Washington by General George and his deputy, Major General C. R. Smith. After we had shaken hands, General George came straight to the point. "Bill," he said, "I'm going to send you to the India-China Division to run the Hump Airlift. What do you think of the idea?"

I did not reply with the prompt alacrity I would have liked to see in one of my own subordinates. First of all, I thought it was something of an odd request. Brigadier General Thomas O. Hardin, an excellent administrator and a good friend, had been in command of the airlift to China for only a few months. It seemed strange that he would be replaced so soon.

I realized with anguish that this meant leaving my beloved Ferrying Division, which I had brought up and nursed along from a few people in 1941 to, that day in early May, 1944, a command of over fifty thousand, including some eight thousand pilots. We were delivering ten thousand planes per month within the United States, over a thousand

per month to overseas destinations. We were running two global airlines, as well as performing all the training for the other ATC divisions. How could I help but feel that the job I was doing there was important?

Finally, if I had to go anywhere, why, of all places, did it have to be the Hump? It was a graveyard for commanders. Of the previous men who had run it, or tried to, none had moved upward on leaving it, and one, a brigadier general, had lost his stars out there.

My own command, I felt with pride but some justification, had earned a fine reputation. The Hump had not. Officers coming back from the China-Burma-India Theater went out of their way to tell you how much they hated it. It was the place to which you exiled officers you wanted to get rid of. I remembered an officer who couldn't get along with anybody. He was arrogant and disagreeable, and he had been dispatched to the ICW. Now he would be one of my staff. I remembered a classmate who had gone through flying school with me and earned his wings, but had deteriorated into alcoholism and had been invited to leave the service. He had come back in during the war and served in my command. It soon became apparent that he was still a drunk. After some futile attempts at rehabilitation I asked him if he wouldn't like overseas duty in India, and he said he would. Well, there were two of the officers I'd be dealing with in my new command, and there were others. I recalled with a slight twinge that whenever the ATC had levied on us requisitions for personnel for the foreign divisions, my personnel officer had occasionally included in the India-China's quota those men my base commanders felt they could best do without. Most men, of course, who were transferred from the Ferrying Division were fine, well-trained pilots and excellent mechanics who had gone through the Ferrying Division's training program—but misfits were not wanted in any outfit.

Though the airlift to China—and the whole complex in India and China—was, like the Ferrying Division, a part of the Air Transport Command, I knew little more about it. I certainly didn't compare it in importance to my own command, and I did not consider the transfer an improvement. On the other hand, I was eager to go overseas. I certainly didn't want to spend my wartime military career in the safety of the States. If my overseas assignment was to be the graveyard of the Hump, well, so be it.

And so, finally, I replied, as enthusiastically as I could, "Why, that sounds fine, sir."

General George did not overlook my hesitancy. He was kind enough to tell me then and there that the Hump Airlift was of far greater strategic value than I realized and that it had the wholehearted support of the President of the United States and the commanding general of the Air Corps.

"Our problem there is twofold," General George said. "First, in accordance with the commitment made by the President of the United States to our Allies, we must raise the tonnage that we are airlifting to China. Second, we must cut down on our accident rate. We're losing too many crews, too many planes. These accidents are of great concern to the President, to General Arnold, and to me." He paused, and looked at me directly for a moment. "And finally, Bill, the morale is none too good."

There was no need for me to remark that my two missions—increase tonnage, decrease accidents—could be considered diametrically opposed to each other. All I could do was submit respectfully.

"When do you want me to take over, sir?" I asked.

"Oh, in a few months. But I would like you to make a quick trip over and back right now to get a firsthand idea of the problem you'll have to face there."

Lieutenant Colonel James H. Douglas, Jr., who was sitting in as General Smith's deputy, spoke up. "I'd like to go too, sir," he said. "I have some problems out there, and I'd like to see the operation firsthand."

"Sure thing, Jim," the General said.

As far as I was concerned, permission for Jim Douglas to accompany me was the only pleasant result of the session. He was an officer of great ability with high standing at headquarters. I knew that I was going to need an unending list of things once I got out on the Hump, and Jim would be just the man to follow up my requests and requisitions in Washington. My estimate of him was later borne out when he became Secretary of the Air Force under President Eisenhower.

"One other thing," General George said just before the conference broke up. "I have a positive reason for bringing Tom Hardin back to the States. It's true that he has been in command of the Hump for only

a short time, but his total time overseas, in Central Africa and in the Far East, totals two years. It's time he had a change of scene."

Douglas and I made the trip in early June on my new Crescent Airline, via Gander, the Azores, Casablanca, Tripoli, Cairo, Abadan, and Karachi. The date is easy to remember. While we were flying over North Africa, we were listening to the details of the Normandy invasion on the radio. Other than that, the flight was marvelously uneventful. There's nothing like flying when you're the boss of the airline. My staff officers had arranged the junket well. We flew day and night, for a total of sixty-two hours on the way out, sixty-five hours on the return trip, and everything went smoothly. We made eight stops, taking on gasoline and a new crew at each point. Just like the old Pony Express riders, the new crews came out to meet the plane with their clearances in their hands, ready to get in and go. At no stop were we more than one hour on the ground. I couldn't help but feel pride at the smoothness and efficiency of this small part of my command. After all, this, along with the Fireball Express, which operated over the South Atlantic, was far and away the longest airline in the world, and it was operating as though it had been in business for years instead of a few months.

There was one tiny drawback: The big C-54 had only one bunk available. I suppose that, as the boss, I could have claimed it, but I never liked to operate that way. Jim Douglas and I matched for it, and he won. And so the lieutenant colonel got to go to bed each night, while I, shiny star and all, tried to catch cat naps back in the cargo compartment, lying down on a few GI blankets on the floor between two big new B-29 engines being hauled out to the CBI.

We spent only a few days with the India-China Division, but that was enough to give me an idea of the fantastic confusion I was coming into. The territory itself was enormous: From Karachi eastward to the bases deepest in China was some three thousand miles. In India my northern boundary would be the great wall of the Himalayas in Tibet, the southern the Indian Ocean; in China the boundaries were the Japanese. And the command was three-dimensional. It extended in depth from the fetid, sweltering river bottoms of tropical India to the barren crags and glaciers atop the towering peaks of the highest mountains in the world.

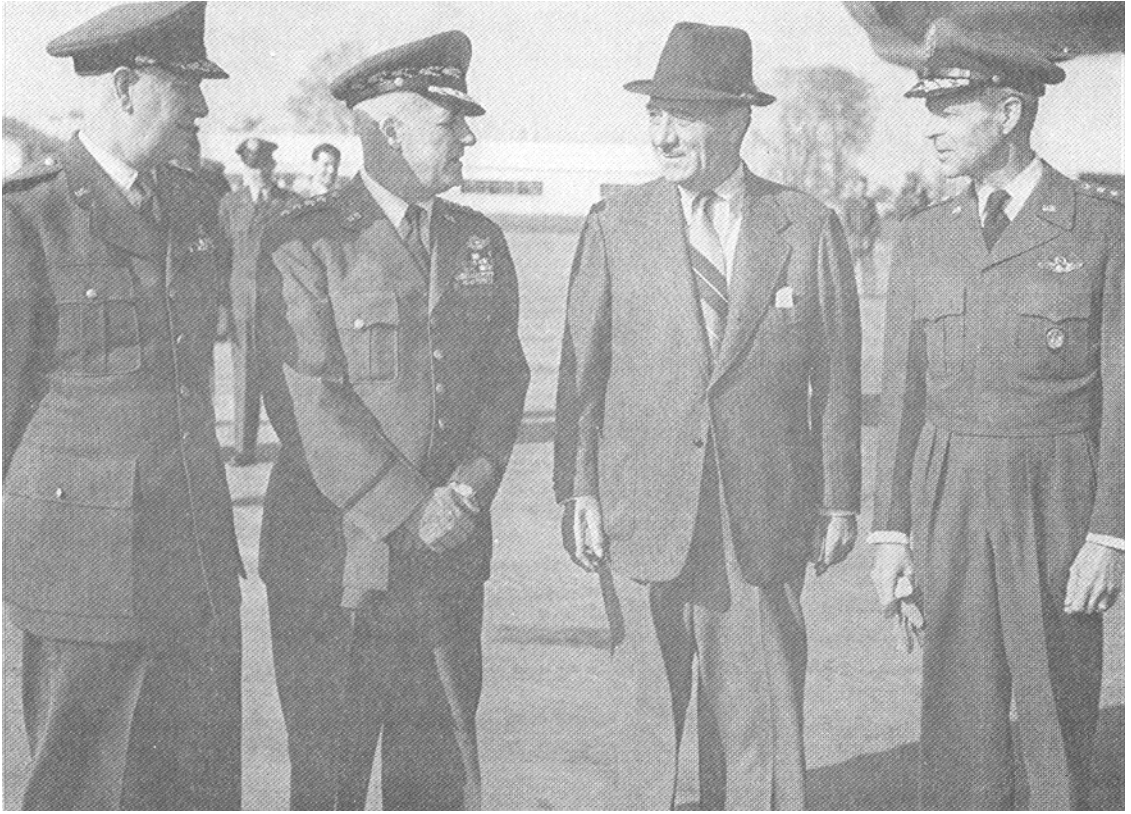
In many parts of India, particularly on toward the west, a thousand

miles or more from the front, life went on as usual as though there were no war. But in China and Burma, men were fighting and dying. On this first brief visit I borrowed a C-47 with crew and flew over the mountains from one of the advance bases in the Assam Valley to land at the airstrip at Myitkyina. At that moment elements of General Joseph W. Stilwell's Allied Forces held the field, but the Japanese held the town. Chinese soldiers were dug in along the airstrip, firing away at the enemy. Somewhat self-consciously, like a sidewalk superintendent watching construction workers on a new building, I climbed down from the plane and walked along the edge of the strip, watching the Chinese soldiers shoot. At the end of the strip itself, behind a crude embankment of loose dirt, Dr. Gordon Seagraves, the famous Burma surgeon, had a field hospital going, attending to the wounded. Some fifteen Burmese nurses, extremely pretty girls who seemed so out of place among the dead and dying, were helping him. Many of them, and Dr. Seagraves himself, were performing emergency operations on their patients. Many Chinese soldiers lay around on stretchers waiting their turn, while the bearers were constantly bringing in more. Fighter planes were coming in and taking off right over our heads; our shells and bombs were bursting in and over the town. In all the confusion Dr. Seagraves was perfectly calm. We talked for a moment as the stretcher-bearers took one patient away from the open-air operating table and brought on another. The new patient had half his knee shot away.

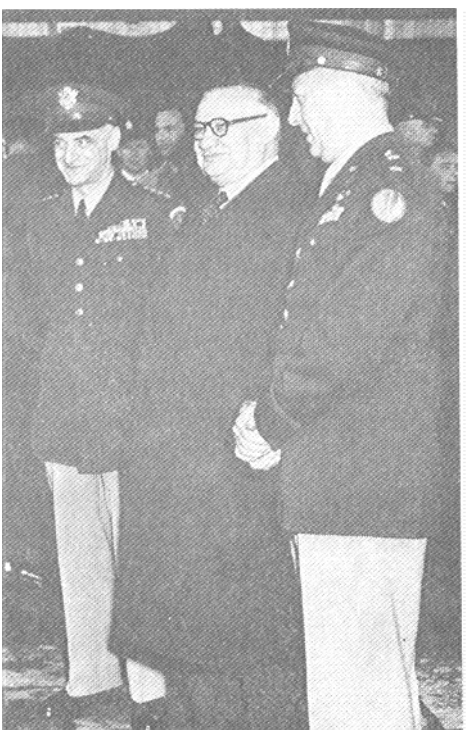
"Now back in America," the doctor said as he examined the wound, "we'd just go ahead and amputate this leg without hesitation. But in China this man would be no good with just one leg—he couldn't survive economically. So"—he was beginning to go to work on it—"I'll try to patch this one up. It'll be stiff, but he'll be able to get around."

There was nothing I could accomplish there, and so we left. But the trip gave me positive proof that within the limits of my command men were killing men.

Douglas and I spent only a few days in the theater, but they were enough to give me a pretty good idea of what I was getting into. I did not see much of the Hump itself on that first trip; I was flown over it, but there was an overcast that day. I looked at the tonnage figures. In January of that year, thirteen thousand tons of materiel had been airlifted over the Hump. In May, the month before I arrived, the figure had

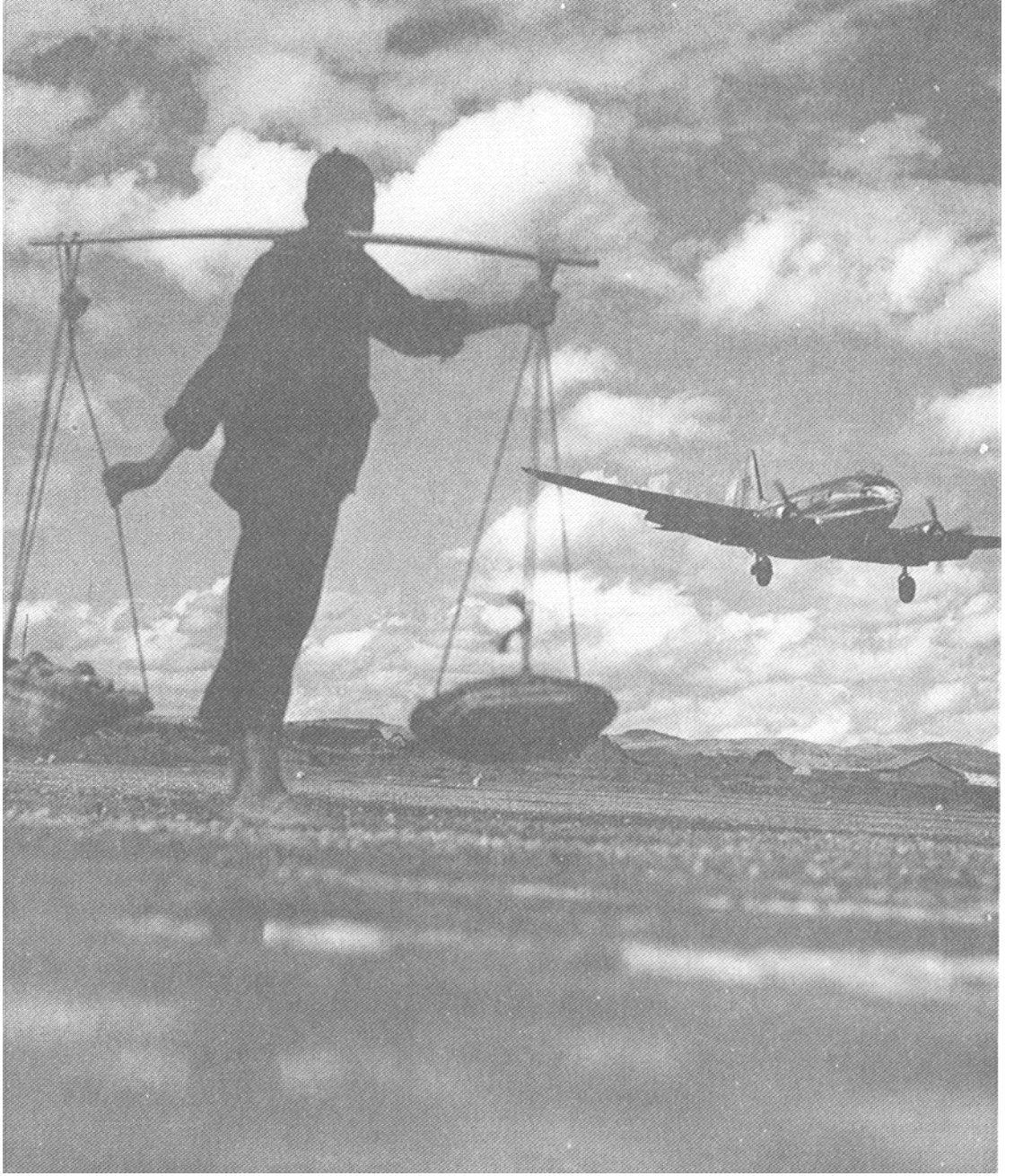


At Orly Field, Harold Talbot, then secretary of the Air Force, and General Nathan Twining, USAF Chief of Staff, are greeted by General Tunner, Commander-Chief, USAFE and Lauris Norstad, Deputy Supreme Commander for Air, SHAPE.



During the Berlin Airlift British Foreign Minister Ernest Bevin chats with General Lucius D. Clay, Military Governor of Germany, and General Tunner at Tempelhof Air Force Base.

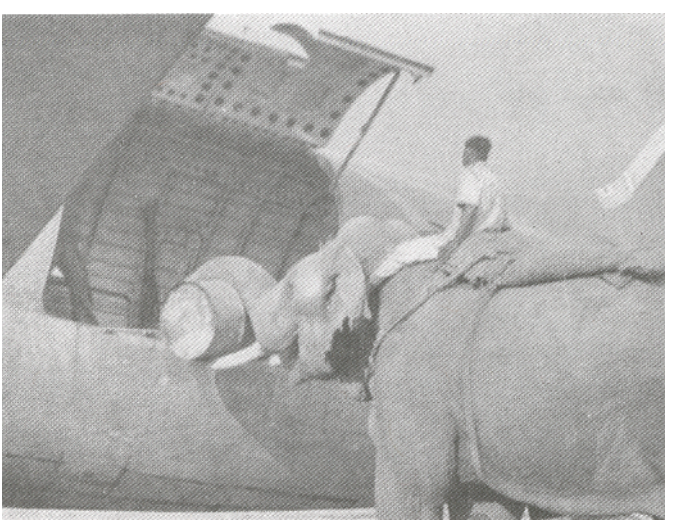
United States Air Force Photograph



A lonely Chinese airfield shows the tremendous difference in cargo transporting techniques. The "very old" and the "very new" (at that time) were outlined clearly in the "Hump" campaign.

United States Air Force Photograph

In the India-China Division of the Air Transport Command every ounce of energy was necessary to accomplish the huge job that had to be done. Despite the obvious primitive methods, the job did get done—and well.



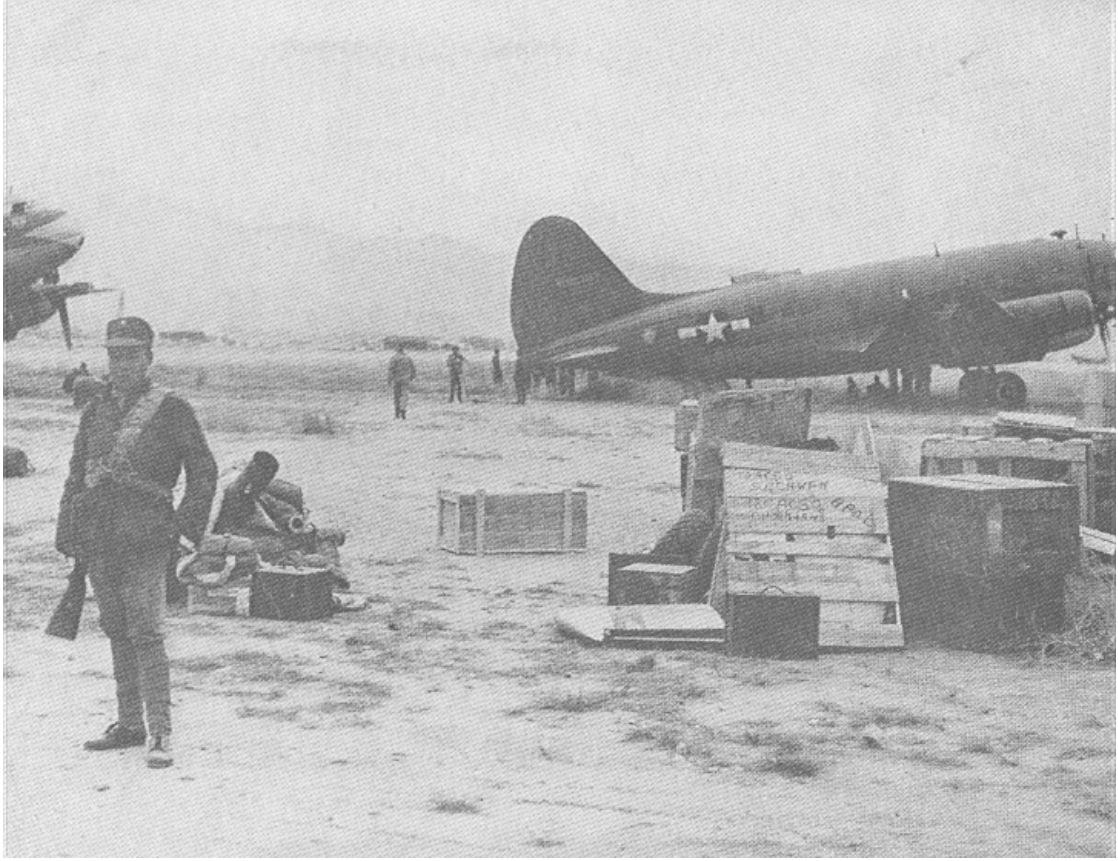
The transport business was able to accommodate all sorts of help in those difficult days during the India-China campaign. Here, an elephant demonstrates his fork-lift technique.



This veteran C-54 shows the effects of the much publicized—and severe —"Hump" weather. No amount of washing could remove the dimples caused by heavy hail on the skin of the aircraft. Serial numbers were often peeled off.

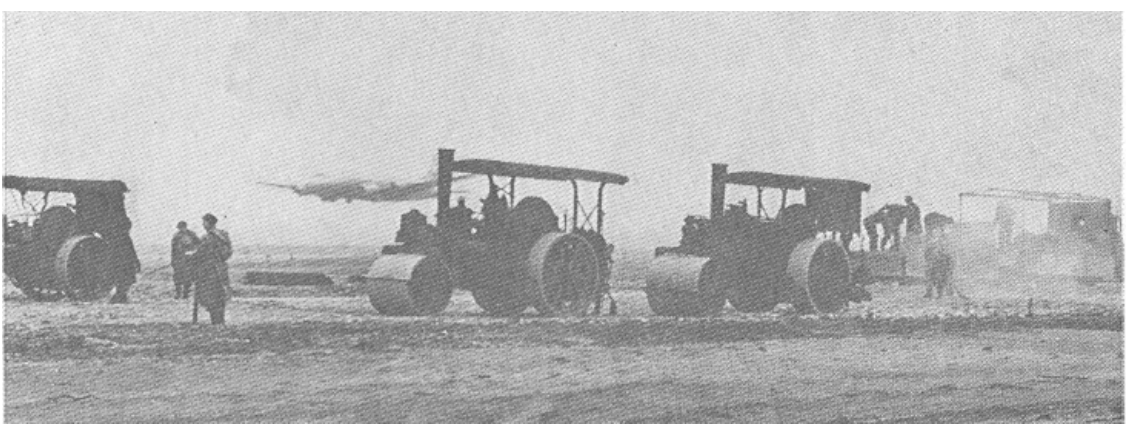


This is just a small insight into the amount of human labor that was necessary to build the airfield in the India-China Command. Earth was moved in the same fashion as it had been for thousands of years. Also, note rollers pulled by crew.



United States Air Force Photograph

Evacuation scene at Syichwan Airfield, China, with Chinese sentry guarding tires and other equipment and baggage that was ready to be loaded on Curtiss C-46 transports.



United States Air Force Photograph

Note C-54 in background of this photo. Construction of an unloading parking ramp continues as usual at Tegel Airfield in the French sector of Berlin. Aircraft, stationed at Fassberg RAF station, maintained a constant stream of traffic.



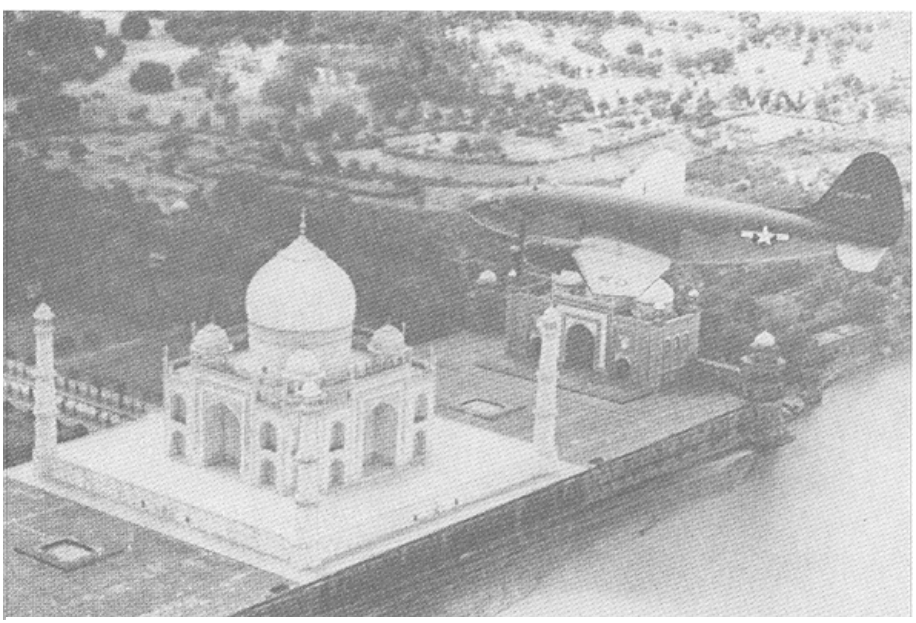
At this USAF hospital in Korea, a helicopter arrives from a forward Mobile Army Surgical Hospital with two wounded soldiers fastened in the litter-baskets on its side.

United States Air Force Photographs



A sign at the Chanyi Airfield in China, on the Chinese side of the "Hump," said, "You made it again—good work." And you were especially fortunate each time the job was successfully completed to be able to get a smoke.

Multicolored parachutes blossom into the skies of northwest Korea, near Unsan, as the U.S. Far East Air Force Combat Cargo Command completes a drop of 80,000 pounds of ammunition and supplies to the ROK First Division.



United States Air Force Photograph

Familiar sight of the Taj Mahal greeted weary airmen of the India-China Division of Air Transport Command. This structure, considered by many the "most beautiful building in the world," contrasted sharply with the destruction of war.



United States Air Force Photograph

General Tunner discusses plans with King ibn-Saud of Saudi Arabia for use of Dhahran Airfield by USAFE forces. Also shown, at left, is U.S. Ambassador Wadsworth.



United States Air Force Photograph

General Tunner greets Colonel Hamilton Heard, who had just returned to Calcutta from a successful conference in China with General Chennault. Colonel Gordon Rust, of the General's staff, looks on.



Retirement ceremony at Scott AFB in Illinois closes one phase of long and happy service to country. General Tunner (shown here with his daughter) is joined by Congressman L. Mendel Rivers and General Thomas White, Chief of Staff, USAF.

fallen to eleven thousand, although June was expected to show an increase, and did. But these were not the important figures to me then. It was the accident rate which most impressed me—with horror! In January of 1944 there were two accidents (actually 1.968) per every thousand hours flown. Every two hundred trips over the Hump we lost an airplane. For every thousand tons flown into China, three Americans gave their lives.

Not only was the accident rate alarming, but most of the accidents were washouts—total losses, with planes either flying into mountain peaks or going down in the jungle. In many of the cases in which there was reason to believe that some or all crew members had been able to parachute from their planes, the men were never seen again. The jungle had simply swallowed them up. The combination of a high accident rate with the hopelessness of bailing out was not conducive to high morale in the flying crews.

Morale was quite low in some parts of the Division, particularly in the Assam Valley among the ground personnel. For the non-flying GI's there was no definite rotation program and they had less chance of being rotated home than members of the flight crews.

Living conditions were generally bad. I had already read much about them in reports that had come back to the States. Men lived crowded in tents or bamboo huts known as *bashas,* which frequently had dirt floors and insect-ridden thatched roofs. This in a land of heat, high humidity, almost constant rain, and mud everywhere. Supplies of just about everything were short—plumbing fixtures, lumber, water pumps, and wiring. These shortages reached a stage where efficiency and proper functioning of the base were affected. The latrines of ICD will probably be remembered longest for the shortage of toilet paper. Radios coming into the States testified to the gravity of the shortage. One phrased it: *Situation bad at Tezpur and Misamari.* Evidently the Quartermaster was beset by similar demands. A reassuring note was struck in a radio to Colonel Hardin then Commander of the Assam Valley Stations: *Quartermaster aware of toilet paper shortage. A large quantity coming by water.* After mail call when newspapers and magazines from home came in, the motto of the day was "Read 'em and wipe."

Supplies of proper clothing, scouring powder, and fly-screening for the kitchens thwarted all efforts to maintain standards of sanitation and

living. I recall Theodore White's article for *Life* magazine, written in December, 1943:

> The food is wholesome but dull beyond imagination. There can be little fresh meat because local cattle are sacred, local pigs are infected with trichinosis, and there are no refrigerator cars available on the railways. Eighty per cent of the food the Americans eat is shipped from the outside—Spam, till it runs from the ears: canned fish, canned corned beef, canned hash, wooden bread, grits.

Then he said about the PX's:

> PX supplies are even lower than in China and the PX supplies are a vital factor in morale. Only rarely can you buy candy or books or magazines; you can't even get sufficient razor blades or shaving soap. Clothing is insufficient—sometimes shirts are raffled off by the PX when they come in because there is no equitable method of distribution.

Certainly C-Rations, Spam, and dehydrated potatoes composed the bulk of every meal—three times per day. PX supplies were practically nonexistent. There was no such thing as a soft drink or ice.

General George, in Washington, had wired in desperation to the ICD Commander:

> Intelligence at . . . reports "food conditions here are becoming almost intolerable." It is idle . . . to state that food conditions in other units are similar . . . This is a disgrace. Give this Headquarters an explanation of this report and tell what steps you are taking to improve messing . . .

General C. R. Smith had been sent out to India to look into these many problems. In reply to a message he received from Washington, Smith said:

> In reference to your message about military appearance, it is difficult to insist that men present a neat appearance when razor blades, tooth brushes, and such articles cannot be purchased at PX's in an area where there are no local stores. The Post Exchange situation has shown no improvement of late.

At the advance base to which we returned after my first trip over the Hump, I shook off the contingent of officers following me around and strolled through the living areas of the GI's by myself. Although prepared, I was shocked by what I saw—the reports were still quite valid.

Men off duty lounging aimlessly around reflected their living conditions. Many had beards and handlebar mustaches; this was all right, but some just hadn't shaved for several days. Their uniforms showed the lack of laundry and were badly worn. They were sprawled around in front of their *bashas,* some playing cards, some reading tattered magazines, most just sitting. Few showed any sign of common courtesy, much less military courtesy, as I walked by. Those who noticed me at all merely looked up with expressionless faces. They didn't even stir, much less stand up and salute. I began stopping to talk briefly with each group, asking such questions as how long they had been in the theater, what their duties were. Most stayed where they were, answering me in monosyllables, with bored expressions on their faces. One or two would laboriously stagger to their feet and give me a sickly smile.

"Weren't you trained to stand up when your boss comes around to see you?" I asked one group. I wasn't being nasty or even sarcastic. I really wanted to know. After a grunt of acquiescence, I asked, "Well, why don't you do it here?"

"Nobody told us to," was the answer.

In this unhappy and unclean environment lived the mechanics to whose maintenance were entrusted the lives of our fliers, the supply men whose job it was to keep spare parts on hand and available, and all the other members of that huge complex necessary to keep planes flying—and *flying safely.*

The reasons for all this was certainly not the fault of top commanders of the ICD who had been and were working their hearts out to accomplish the mission. The reason was simply India, the ICD and the China-Burma-India theater were at the end of the United States pipeline. Parts, equipment, supplies as well as adequate personnel, were just not being pumped through to the end.

On the way back home, flying halfway around the world again, I found myself anticipating taking over the command of that whole unhappy operation. I had proved I could build an organization from

scratch. Now I had the opportunity to take over a chaotic situation and make something out of it.

I never doubted, not ever, that I would succeed. But this personal eagerness to face the challenge was of course subordinate in my mind to the realization of the airlift's great importance in the war effort.

I made it my business to learn the early history of the airlift, and the reasons behind it. There was no doubt but that this far-off, unheralded innovation in logistics was one of the most vital operations of the war. Just one of its accomplishments made it militarily worth while: By means of the Hump we enabled the Chinese armies to keep up their resistance, which in turn made it necessary for the Japanese to keep a well-trained and well-equipped force of up to two million men in China. And every Japanese soldier tied down in China was one less Japanese soldier shooting at American soldiers, sailors, and Marines in the islands of the Pacific.

But this was only a by-product of the original mission of the China Airlift. When the Hump was first visualized it was in keeping with the views expressed by President Roosevelt on February 25, 1942, that "it is obviously of the utmost urgency . . . that the pathway to China be kept open." At the time it was considered that China was the only possible base for the eventual counterattack against Japan. It was absolutely vital that China be kept in the war.

In early 1942 no thought whatever was given to airlift anywhere in the world, much less over the remote and forbidding terrain that lay between India and China. Allied hopes lay instead in the conventional transportation of supplies overland, via the Burma Road. This narrow track, for much of its length only wide enough to handle a single lane of traffic, twisted and turned over the mountains from upper Burma to Kunming, a distance of over five hundred miles. Supplies for China came in through the port of Rangoon, and were then shipped by railroad north to Lashio, where the road began. The Burma Road was a fantastic accomplishment of engineering and road building, but it could never have served as the sole means of logistics for both the Chinese armies and the American troops eventually based in China.

But it was all we had at the beginning of the war, at least in the minds of the high command, and the fall of Rangoon to the Japanese in March of 1942 was a crushing blow to Allied hopes. Some frantic

planning obviously followed the loss of the port. The solution finally chosen seems, in retrospect, almost incredible, yet at the same time it shows the imagination and daring used by the early pioneers in airlift. Under this plan supplies would be brought in to Calcutta, then shipped a thousand miles over primitive railroads to Sadiya, far up the Brahmaputra Valley and the easternmost point in India. From there the supplies would be airlifted two hundred miles, over the Naga Hills southward to Myitkyina, on the Irrawaddy River. There they would be loaded onto barges, and floated down the Irrawaddy to Bhamo, a point on the Burma Road still far, far from Kunming. A combination of narrow-gauge railroad, airlift, and barge—all in order to begin the truck haul over the Burma Road! Extensive preparations for the plan were actually begun. Engineers were rushed to Myitkyina to begin the construction of the hard-surfaced airfield. And then the Japanese put an end to this brave but tortuous plan by capturing Bhamo, then Myitkyina, and then Lashio. There was now no other way to get supplies into China except by airplane from the Assam Valley itself all the way to Kunming, over the mountains and jungles of northern Burma.

Though there was simply no other recourse, I still can't help but feel great admiration for those desperate Army Air Corps planners who proposed to do what had never been contemplated before. Remember that once the airlift got under way, every drop of fuel, every weapon, and every round of ammunition, and 100 per cent of such other diverse supplies as carbon paper and C-rations, *every* such item used by American forces in China was flown in by airlift. Never in the history of transportation had any community been supplied such a large proportion of its needs by air, even in the heart of civilization over friendly terrain. Yet this was achieved in the Himalayan Airlift, undertaken with no previous experience and under the most difficult conditions. Begun when air transportation of heavy cargo was in its very infancy, carried on with steady increase in spite of the enemy and formidable weather conditions, and over the most menacing terrain, all this half a world away from home, the Hump Airlift proved, forever, the efficacy of air transportation.

After the Hump, those of us who had developed an *expertise* in air transportation knew that we could fly anything anywhere anytime.

But in those early days of 1942 there were no service experts in air

transportation. At first the responsibility for airlifting supplies into China was given to the United States Tenth Air Force, headquartered in India. Our logistic planners did not know then what they should know now, that combat commands do not make the best operators of air transportation. The Tenth Air Force, under Major General Lewis H. Brereton, had its hands full in those first few months of the war with just holding its own against the onrushing Japanese. To headquarters, which command fighting forces, either strategic or tactical, air transportation seems easy. Too late it frequently develops that it is not. The Hump, even in those early days, was a complex job. Distances alone made the operation fantastically difficult. The distance from the United States to the theater itself made for impossible delays. In the beginning the great proportion of both men and equipment went by sea; the journey could take up to six months. In the early part of the war the port of debarcation was Karachi, fifteen hundred miles across India—by primitive railroads of varying gauges from the Assam Valley. The ports of Calcutta and Bombay, of course, were much closer, but at that time there was a quite reasonable fear that they might fall to the Japanese.

And finally, once materiel destined for China had reached the Assam Valley, the nearest point to China from which we could safely operate, there was still a distance of 550 miles over towering peaks and forbidding jungle to the rough airfields of western China.

The problems were difficult enough for those few men who had experience with, or interest in, air transport. For those who tried to operate it with their left hands it was impossible. The first cargo-carrying flight was made over the Hump on April 8, 1942, with a load of high-octane gasoline destined for the planes of then Lieutenant Colonel James H. Doolittle, who led the famous bombing attack on Tokyo from an aircraft carrier in the Pacific Ocean on April 18. During April and May, under command of the Tenth Air Force, a handful of planes, mostly C-47's, flew a total of 308 tons to China. By August the monthly figure had reached 700 tons, but this was certainly not going to keep the Chinese in the war.

In Washington Generalissimo Chiang Kai-shek's envoys were putting pressure on both civilian government heads and the military. Trouble shooters were dispatched to India to find out what the difficulty was.

Two separate reports put the blame not only on the lack of everything —aircraft, proper maintenance, fields, personnel—but on the defeatist attitude of the officers entrusted with the job. Cyrus R. Smith, Deputy Commander of the Air Transport Command and then a colonel, studied the reports and wrote a brilliant and solid proposal to the effect that if the ATC were given the mission and let alone, it would get the job done. Smith's proposal specified that all personnel, aircraft, maintenance facilities, and spare parts sent to the theater for the airlift to China be assigned to the ATC, and nobody else. It specified that the ATC have full control of the operation under the direct supervision of General Arnold, not the theater commander. As Smith put it—

> The principal experience of the Air Transport Command is in air transportation, as contrasted with the experience of the theater commander being principally in combat and in preparation for combat.... The India-China Ferry operation must be conducted on the best standards of transportation if it is to have maximum effectiveness.

It could not be said any plainer. The ATC was ordered to take over the Hump, and it did so, on December 1, 1942. By that time the airlift had already gone through two commanders.

The first commanding officer of the ATC's new India-China Wing was my old friend Colonel Edward H. Alexander, whose departure from the early Ferrying Command had left me with his job as executive officer as well as my own job as personnel officer. Alex, the conscientious, worrying type, who took a personal interest in the smallest details of his command, worked day and night, night and day, on the myriad complexities of that faraway operation. He was up against a mountain of problems. He worked incessantly, but when he cleared up one matter, two others rose up to take its place. Alex commanded the Hump for ten months. He had become a sick man.

In the meantime, as an ATC operation, the India-China Wing had been assigned a few more planes. But there was a shortage of crews. The men were flying to the limit of their endurance, well over a hundred hours a month over the world's worst run, but still planes were sitting on the ground for want of crews to fly them. The monsoon season closed down two of the three bases in operation in India, with a result-

ing jam and confusion at Chabua, the one base remaining in operation. Alex was still crying for more men, more planes. He got thirty new planes—and they turned out to be C-46's.

This two-engine plane carried four tons, as opposed to the two-and-a-half-ton payload of the C-47, but though it eventually proved to be one of the work horses of the Hump, it was never as dependable. The first models to arrive in the India-China Wing had not had all the bugs worked out. It was easy to lose an engine on take-off, and when you did, you went straight down to explode with four tons of high-octane gasoline. It took the rugged conditions of the Hump to bring out the worst of Ol' Dumbo. Most of the bugs were eventually worked out, though it was never a completely dependable plane. And in the meantime, C-46's were killing crews.

In the first month of ATC control, the Hump hauled eight hundred net tons of cargo to China. The figures showed a steady increase up to three thousand net tons in July of 1943, but Alex had promised that he would deliver four thousand tons a month.

Again the repercussions. Brigadier General Clair F. Chennault, who had performed such a brilliant job with the outnumbered and beleaguered China Air Task Force, now was commanding the Fourteenth United States Air Force in China. For several weeks in the spring of 1943, lack of aviation fuel forced him to shut down all combat operations. General Chiang Kai-shek was unhappy, and Madame Chiang came to Washington, where she appeared before Congress to plead for more aid. President Roosevelt ordered that the tonnage be increased up to ten thousand tons by September, and held there. To enable the airlift to reach that figure, a promise was made of increasing the number of airdromes in India to seven, and of a general increase in planes, maintenance facilities, spare parts, and personnel. But not all that was promised was forthcoming.

General George visited the Hump in September of 1943. One of the results of that visit was the Fireball Express, which he ordered me to put into effect in order to rush vital spare parts from Miami to India. Another change was to send General Alexander back temporarily to the Caribbean command. He later commanded the ATC in the Southwest Pacific. Brigadier General Earl S. Hoag took over the command of the India-China Wing, with Colonel Thomas O. Hardin as his deputy.

Hoag and Hardin put on a tremendous drive, and in December of 1943, 12,590 tons were delivered to China bases. The Wing was given a presidential citation. Hardin, who received chief credit, was promoted to brigadier general and given a month's leave. In April, 1944, he became commander of the entire operation, now enlarged to the India-China Division.

And he deserved it. Tom was a driver. He drove himself and he drove his men. An excellent pilot himself, he expected the pilots under him to get those planes through. He introduced night flying on the Hump, although radio communication and navigational facilities were nonexistent except at the terminals, and though means of lighting the fields were crude. It was at this time the statement, "There's no weather on the Hump," became the battle cry. His planes went out in fair weather or foul. According to a report made by C. R. Smith, planes flew whether they met standard Air Corps specifications or not. "If Air Corps technical orders were now in force, I doubt that there would be an airplane in the air," Smith wrote.

War was raging in China. Supplies just had to get in or all would be lost. There was no other way but over the Hump. The airlift had to go.

The tonnage mounted, but so did the accidents. Between June and December, 1943, there were 155 aircraft accidents in the Division. Crew fatalities alone, not including passengers, totaled 168. In November, there were 38 major accidents. It was safer to take a bomber deep into Germany than to fly a transport plane over the Rockpile from one friendly nation to another. Complaints and protests from wives and parents and relatives of men lost on the Hump began pouring in to the President and the Congress. The President sent for General Arnold, General Arnold sent for General George, and General George sent for me. Alexander had paved the way, Hoag and Hardin had increased tonnage, and now it was up to Tunner to continue the increase in tonnage, but at less cost in American lives.

Though I did not assume the command of the India-China Division until August, 1944, I began preparing for it as soon as I returned to my headquarters in Cincinnati from that first brief trip. I started out with one distinct advantage, the full backing and support of General George. When I reported in I told him, and Colonel Douglas backed me up, that we could increase tonnage on the Hump and at the same

time decrease accidents. But I also told him frankly that it was a tough area in which to serve and a tough operation to command. The Airlift needed greater recognition from Washington. It needed higher priorities, more spare parts, more personnel.

"And I'm also going to need your personal backing, sir," I told him. "You were correct when you told me that we had serious morale problems there. I'm going to have to shake up the entire division, and I know that you will be receiving complaints. Will you back me up?"

"You can count on me, Bill," he said. That was all I needed.

General George authorized me to take eight officers to my new command. I immediately started lining them up. The first man I approached was Temple Bowen, one of my most valued staff officers in the Ferrying Division. Bowen had been sent to me, when still a civilian, by General George's deputy, Cyrus R. Smith. He was the epitome of the American self-made man. I don't believe that he ever finished grammar school, but he had gone far in the business world. He had organized an airline serving Texas and Oklahoma, which American Airlines bought out to obtain the routes he had pioneered and thus become a transcontinental airline. This was how Smith, American's president, had come to know him. After his airlines experience, Bowen organized a bus company. When he came to me, his company owned four hundred buses operating throughout his native Texas.

Smith had suggested that I could use Bowen in Supply. After an interview of only a few minutes, I concurred. On the basis of his age and experience Bowen was commissioned a major, and went to work for me as Chief of Supply. He did such an excellent job that I gave him the additional responsibility of Chief of Installations and Engineering. When he became familiar with those duties, I added that of Chief of Maintenance. He never complained, and he got the job—all the jobs—done.

Temple had a keen, businesslike mind. He was quiet and thoughtful. In our staff meetings he was nearly always the last man to speak up with his opinion, but that opinion would nearly always turn out to be the basis for the eventual decision. When I asked him if he would like to go to India with me, to carry on the same duties there that he had been carrying on with the Ferrying Division, he not only acquiesced without hesitation, but seemed grateful for the opportunity. When we

did arrive in India, incidentally, I found that Hardin's deputy commander was in ill health and had to return to the States. I immediately made Temple Bowen my deputy commander, or executive vice president.

Only a few days after I returned from the indoctrination trip to India I received a telephone call from a Lieutenant Colonel Robert Bruce White, requesting an interview. White was assigned to the Air Corps Training Command, which of course had no foreign operations, and was chafing at the bit because he wanted to go overseas. Like many a rose born to blush unseen, he was a good man buried in an important but glamorless headquarters. What impressed me about Bob White right away was that he knew I was slated to command the Hump. At the time, only a very few people in the Pentagon knew that I had even been considered for the job, and the fact that it was now definite was top secret. But White had managed to find it out. A man like that comes in handy.

White had been a major in the Reserves before the war, and had worked for Standard Oil of New Jersey in China. He must have been outstanding as an executive. In the training command he had promoted an industrial-type method of maintenance. It was his baby, and we had hardly been talking two minutes before he was enthusiastically describing the virtues of production-line maintenance, or PLM. Well-educated, soft-spoken, with a command of English that became almost poetic on subjects he was enthusiastic about, White sat there in my office and in thirty minutes sold me on himself and on PLM. He explained how from three to ten stations would be set up, each of which would perform a specific maintenance function. Airplanes would progress from station to station as though on an assembly line. At Station No. 1, for example, the inspection plates would be removed and the plane given a thorough washing and cleaning, inside and out. At the next station another set of functions would be performed, at the next another, and so on. At the last stop the plane would be buttoned up, the inspection plates returned to position, and the chief inspector would make a final, rigorous inspection. If satisfied, he would approve it for the test flight.

I knew full well that the maintenance I was going to get would determine the success or failure of the operation. I must get the maximum performance out of the planes assigned to my command, or I

would fail to do the job. PLM, with Bob White to put it in service and make it work, might well be the answer. I checked on both with officers whom I could trust in the training command, and every response was enthusiastic on both the man and the method. There was nothing else to do but ask for him. I did.

The Training Command turned me down cold. They wanted Bob White too.

I wrote a strong letter setting forth reasons why White could serve his country better in the CBI than in Texas, and some sympathetic officer in the Pentagon, himself doomed to sit at a desk in Washington for the rest of the war, overruled the Training Command and let White join me on the Hump. Bob proved to be everything I had hoped for, and more. For in addition to being a superb executive, he was also a marvelous companion. Though he had great personal problems of his own, he seemed to feel that everyone else in the world had found personal happiness, and he was glad. In times of strain and stress, particularly when far away from the drawing room, many men tend to become profane, but the harshest epithet I ever heard Bob White use was a quiet, heartfelt "Damn!" Yet he had a backbone of unbendable alloy. When sent out to conduct an investigation, nothing mattered to him except the facts, and that's what his reports contained. He did not consider such items as the rank of the person he might be criticizing, or his own future. He just went ahead and put the facts on the line.

And then there was Red Forman, whom I had signed up in Memphis and who was my most active reserve officer there. Red had been a barnstormer and crop duster. When he first came to me he was the youthful, red-headed owner of a skating rink and swimming pool in Memphis, and he also owned his own private plane. Red liked the ladies, and the ladies liked Red. Everybody liked Red, for that matter; he was by far the most popular officer who ever served with me. I don't know of any man who spent fifteen minutes with Red Forman who didn't come away with the belief that he had found a lifelong friend.

Red was one of the finest pilots I ever knew. In technical matter, he made it his business to learn every detail, and consequently spoke with authority. I asked him, and he accepted immediately, to come with me as Chief Pilot of the India-China Division. He would be the

over-all supervisor of every pilot on the Hump. Every pilot would be checked out according to his specifications.

Another key man in my setup in India would be the Chief Statistician, and I knew the man I wanted. Early in my days in the Ferrying Command a young man named Kenneth Stiles, who looked more like an Eagle Scout than the second lieutenant he claimed to be, had come in to my basement office looking for a job.

"What can you do?" I asked.

"Statistics, sir," he answered promptly.

At that time, I was trying to keep tab on the hundreds of airplanes being ferried about the United States and overseas as well. I showed him how I was doing it and asked if he thought he could improve it. He said he thought he could.

"Do you think you could set up another system which will enable us to keep track of the state of training of our pilots?" I asked. "They change status daily."

He said he thought he could do that too.

"Fine," I said. "There's a desk, and there's a chair."

"Oh, I can't do that, sir!" he cried. "I have to go back to New York to tell my wife what I'm going to do—but I can be back in two days."

In two days he was back, and within a week he presented a statistical program, complete in every detail, which simplified our work, cut down on the number of people posting figures, and gave us the complete situation at a glance.

Stiles was the youngest man on my staff. When he first joined, he had little practical experience in his field. But he was sound and capable. When he spoke up at a meeting, we all listened, for we soon found out that he knew what he was talking about. His talents were a necessity in such a spread-out complexity as was the Hump at that time. I was not at all happy with the statistical reports that had been kept. We knew how many tons had been flown, how many trips and how many planes, and we knew something about the accidents, but we did not know enough. To conquer this problem, to save the lives of Americans, to keep planes flying, we had to know exactly the causes of each accident. We had to know what each base was doing—why one base had more engine changes than another, why one took longer to load or unload an airplane than another, why there was more illness, more morale problems

at one base than another, why there was better production at one base than another. In conjunction with my young, able, and intelligent flying safety officer, Captain Arthur Norden, Stiles devised statistical programs which would help us answer such questions as:

Was the accident due to structural failure, maintenance failure, pilot failure, or crew failure, or airdrome or some other failure?

What airfields had the most accidents?

What type aircraft had the most accidents? What model?

Was there any similarity in the accidents under investigation? Any similarity with other accidents?

What was the weather before, during, and after the accident?

What were the communications with the plane prior to the accident?

How did the accident rate of the base from which a certain accident occurred compare to other bases with similar aircraft?

How did this base rate in its accident picture?

How did this type of aircraft rate in the over-all accident picture?

What was the over-all rating of this base in its maintenance performance?

What was the rating of this base in regard to checks of pilots by the Division check pilot?

How many Hump hours did the pilot have who had the accident?

How many total hours did he have?

What was the estimate of the local check pilot as to the proficiency of the crew?

How many flying hours did each crew member have?

Who checked off the pilot who had the accident and certified him as capable?

Who checked off the maintenance of the aircraft as O.K.?

What was the caliber of morale at the particular base?

If the accident was due to maintenance or structure, were there any similarities to this and others? If due to pilot error, what, if any, idiosyncracies in flight characteristics did the plane have?

How did the pilot and crew spend the preceding forty-eight hours? Did they have ample rest? Were they over-flying?

Or had they been flying too little during the past month? The past three months?

To answer these and many other questions, Captain Stiles set up

statistical systems which were certainly the best in effect in any theater at the time, and are still good today. Stiles went on to become a major general in the Reserve, and a vice president of General Dynamics Corporation. Norden became president of Seaboard Western Airlines, a corporation of great value to the United States during the Korean war.

Another youthful-appearing member of our staff was Lieutenant Colonel Hamilton Heard, whose pink cheeks and blue eyes gave him the air of a perennial freshman. Actually Hammie graduated from Harvard in the same year that I graduated from West Point, 1928. He was Boston, Groton, and Harvard in dress, speech, and attitude. Very proper, and a mature thinker, he was thoroughly liked by everybody. When the headquarters of the Ferrying Command moved from Washington to Cincinnati, I kept Hammie in Washington as a kind of trouble shooter there. He did an excellent job. Now I pulled him out of Washington and, with General George's permission, sent him on ahead as a one-man advance party to the India-China Division.

Another of my selections was Gordon M. Rust, a big man with an unsmiling face. Rust, a graduate of Amherst, was our scholar, our intellectual. He was a constant optimist. He was also an idealist and an excellent writer. I would need a man to handle communications intelligence and public relations, who was also able to fill in as an administrator when needed, and Rust was a natural choice.

My two remaining officers were both lawyers, both from Little Rock. Colonel Dudley Coates, an able Yale graduate, had served well as chief of personnel for the Ferrying Division, and Lieutenant Colonel Ike Teague was his deputy. When we reached the ICD, Coates became my liaison officer with the theater staff in China, and Teague became my chief of personnel.

This was my staff, my board of directors. I had one more to choose, and I asked for Colonel Andrew Cannon. Andy was one of those men born to fly. He'd been a stunt pilot before he'd been brought into the Ferrying Division at the very beginning by General Olds. Cannon was from New Hampshire, but I always thought he talked like a Texan. Whenever you saw Andy with a group of people, you could bet that he would be the one doing the talking. He was quick-witted and clever, and it was a pleasure to listen to him. As Cannon went up the ladder,

he established a reputation for being loyal to his men, and I learned through personal experience that they were loyal to him. Bright and early one Monday morning, back in 1941, I received a report that a brand-new fighter plane had been seen cutting up shenanigans over the beach at Long Beach, California, on Sunday afternoon. The first report said the pilot had been flying it upside down with his head just ten feet over the waves. Somehow or other that sounded like Cannon to me, although I thought the ten feet was probably an exaggeration. I assigned an officer to investigate the occurrence. His first report was to the effect that it was no exaggeration at all. Some witnesses said the pilot's head had been only eight feet over the waves.

When it came to identifying the pilot, however, my investigating officer ran into a stone wall. Whoever it was, nobody was going to snitch on him. It just so happened that at the time I was looking for a new commander for our Long Beach airbase, a man who could lead and control the group of hard-flying young pilots, one who would have the loyalty of his men. I decided to call off the investigation. The investigating officer was just wasting time, and it would also now be somewhat embarrassing if my new base commander, Andy Cannon, were unmasked as the mysterious stunt flier. Anyway, he was not endangering anyone's life but his own and in those days stunting was a mark of a keen pilot.

For the Hump, I needed that same kind of commander for the Bengal Wing. This wing would have only one mission, to fly the Hump, and I wanted a man I could count on to command it. Andy Cannon was my choice, and he didn't let me down. But it was not until years later that he finally admitted to me, with a grin, that he had indeed been that stunt flier at Long Beach that Sunday afternoon.

I intended to put a lot of eggs in that one Bengal basket. The Hump Airlift had begun, you recall, with a small fleet of sturdy C-47's. Then the C-46's had begun to come along, but although bigger and heavier, with a greater capacity, Ol' Dumbo was still only a two-engine plane. When an engine went out, as it too frequently did, you were left with only 50 per cent of your original power, and on the bug-ridden C-46 that wasn't enough. What the Hump needed was a plane bigger than the C-46, but with the dependability of the C-47—and four engines. Fortunately such a plane was now in existence, and would soon be available in quantity. I was personally convinced of its dependability, for I

had placed it in service on the Crescent Run and had watched it build up millions of miles of service. It was the four-engined Douglas transport, the DC-4, known to the Air Corps as the C-54.

Some years before, I learned later, an army general had seriously asked Donald W. Douglas, president of Douglas Aircraft, which designed and built the plane, "But what *possible* use could the United States Army have for a four-engined transport?" Douglas had persisted, in spite of that shortsighted attitude. Laid down in 1938, the plane was originally scheduled for delivery to airlines in 1942. Three times bigger than the C-47, but relatively easy to maintain and extremely durable, it proved itself in 1942 and 1943. It would be available in quantity soon after I took command of the Hump. Andy Cannon's Bengal Wing would be composed initially of one hundred C-54's and some fifty C-109's. Eventually it would be an all–C-54 operation.

The official history of the Army Air Forces in World War II reports that with my assuming command of the ICD "the age of big business" was under way, and continues as though my so-called businesslike methods comprised something new in military operations. This is only partially true. In the first place, my staff and I began preparing for our mission in India and China weeks before we left the States. In the second, although my methods may have smacked of big business, hard-driving big business, they could also be found in military textbooks. Since time immemorial the commander of a military unit from a company up has had a staff to advise him and carry out his orders. My contribution was to carry the staff-concept to its fullest potential. I knew that no halfway measures would lick the problems we would meet on the Hump—only an all-out concerted effort on the part of dedicated and capable men working long hours seven days a week would bring success in our mission. That is what I intended to get from my staff, and I selected them accordingly.

A German general of some generations ago, when asked how he assigned his personnel, replied he first determined if they were lazy or industrious, intelligent or unintelligent. The commanding officer, he said, should be lazy and intelligent. The man who is lazy and unintelligent makes a good greeter, a front-office man. The man who is industrious and unintelligent—get rid of him. But the man who is both industrious and intelligent is your staff officer.

The perfect staff officer should be a man of many abilities, for he has many duties to perform. One is supervisory, for he must keep close control over his opposite number in the field and on the bases, to insure compliance with policies, regulations, programs, and standards of the higher headquarters. He must be a clearing house of information, analyzing and passing along the ideas and techniques proved successful by individual bases. There is, for example, only one best way to fly an airplane; there is only one best way to land, to take off, to fly or land with one engine gone or in heavy turbulence. There is also one best way to requisition a paper clip. The staff officer should constantly be on the lookout for the best way, recognize it, and push it along.

The staff officer must also remain in close contact with as good relations as possible not only with the officers in the field, but with those of adjacent commands. He should be a good team man, and hold his temper.

But above all else, he must be industrious and intelligent.

Long before we arrived in India, we had established a standard procedure for staff meetings. My staff and I met not once a week or twice a week, but seven times a week at 8 A.M. sharp. Attendance was compulsory, and every officer was expected to be prepared, even if he had to devote the entire night to the preparation. As a matter of fact, no member of my staff worked less than twelve hours a day, seven days a week. No matter where or when you dropped in on them, in office, quarters, or home, day or night, you'd find them with other officers, in a meeting. It seemed that everybody was always in a meeting.

Just as every member of my staff was always prepared, so, too, I made it my business to be. When a meeting began at 8 A.M. sharp, I had in front of me a list of the problems which needed to be taken up that day with the appropriate staff officers. In actual operation, on the Hump, our staff meetings were attended by some twenty officers. Frequently I had questions to take up with all of them. My policy was to bring each problem to the attention of the pertinent staff officer in turn. After I had finished with each officer, I would ask if he had anything else to offer before going on to the next. Some meetings were short, many were long. But regardless of how much or how little time was left in the day following the meeting, we were all, every member of the staff and myself, charged with the duty of completing the assigned tasks for the day. And

if the days did not offer enough hours to perform our tasks and to sleep, too, well, we had not come to India to sleep.

But to repeat, these staff meetings had begun long before we left the United States. From the time they became members of my staff, my hand-picked men were busy. My personnel officer, Dud Coates, got busy lining up good people. Bob White began setting up a plan for production-line maintenance. Temple Bowen got busy requisitioning not only desperately needed spare parts, but the new DDT powder for the mosquitoes and—unknown in India—concentrated Coca Cola for the men.

While we were having these board of directors–type meetings back in the States, Hammie Heard was in India, scouting around, looking for trouble spots. Thanks to that impeccable background and the ways of a gentleman in every respect, Hammie was the perfect man for the job. I'm sure that efforts were made to get under his skin in hopes that he would lose control of himself and act in an objectionable fashion, but I'm equally sure that he maintained perfect control of himself at all times. He did not send running reports, but held them until he could sit down and give them to me in person after my arrival.

This constant and thorough preparation for every phase of the mission it would be possible to control was particularly essential in this operation, if only because we would encounter so many phenomena we would *not* be able to control. Weather, for example, and terrain. Enemy activity, and dangerous tribesmen and predators.

The weather on the Hump changed from minute to minute, from mile to mile. One end was set down in the low, steamy jungles of India; the other in the mile-high plateau of western China. And between the two lies the Rockpile, a law unto itself. In addition to the Hump proper, of course, the India-China Division had the weather all across our three thousand-mile wide area to contend with, from areas flooded by two hundred inches of rainfall a year to the dust storms of the deserts, and from the tropical climate of the south to the blizzards of the high mountains to the north.

But the Hump itself offered variety enough in weather. Let's look at it season by season, beginning with the worst—*spring*. That's when the thunderstorms begin building up out of nowhere, piling up over the peaks and ridges, more and more until they towered over us. We had planes go up to our maximum ceiling of thirty thousand feet and still

they were in the clouds. Above fifteen thousand feet icing conditions would set in. And since at fifteen thousand feet some of those clouds had rocks in them, this meant we must constantly fly in icing conditions.

In these clouds, over the entire route, turbulence would build up of a severity greater than I have ever seen anywhere else in the world, before or since. Winds of as much as one hundred miles an hour, piling into the steep barren slopes, would glance off to create updrafts over the ridges, downdrafts over the valleys. Planes caught in a downdraft could drop at the rate of five thousand feet per minute, then suddenly be whisked upwards at almost the same speed. These tremendous storms would come on with great suddenness; there was no way of telling the amount of turbulence within a cloud until you were in it. The worst storm we ever had on the Hump occurred earlier than the usual spring thunderstorms, in January, but its characteristics were the same. It brought violent gusts and updrafts along with severe icing, sleet, and hail. A one-hundred-mile-an-hour wind, howling across our east-west routes directly from the south, blew planes far to the north among the high Himalayas. Conditions were the same from fifteen thousand feet to thirty-eight thousand feet—we couldn't get under, and we couldn't get over.

A pilot named Thomas Sykes was trying to get through in a C-46 at twenty-five thousand feet when suddenly a downdraft caught the plane and a capricious gust flipped it over on its back. In a matter of seconds he was at nineteen thousand feet, where another gust turned him right side up again. A brown, barren mountain crag whizzed by, almost close enough to touch. But Sykes brought his plane home safely.

Others were not so fortunate. The radio was filled with cries of "May Day!" that day. Planes were blown so far north off course they crashed into mountains pilots did not even know were within fifty miles. That one storm took its toll of nine aircraft lost, and though some men were able to bail out, eighteen crew members and nine passengers did not. In addition to our losses, a Chinese civilian transport corporation lost all of the three planes it put in the air that day, and American tactical commands lost three more. It was by far our most tragic day, and all due to weather.

And that was the type of weather we could expect in the spring months on the Hump. In May the strong westerly winds began to fade, to be

replaced by winds of variable direction. Early in the morning the clouds would begin to form, but for several hours we could fly over them. By noon, however, they usually joined together in a solid line, reaching up to thirty thousand feet, and from then on it was strictly instrument flying. In the area between the first ridge and the main Hump the thunderstorms would contain particularly severe turbulence and ice.

The monsoon season, with its incredible amounts of rain and muggy, humid weather over India, lasts from May to late October, and then comes the fall. Then the weather is predominantly good over India and Burma. This is by all means the best flying time of the year. In India the dry season, from November until March, brings bright, clear, invigorating weather, in which it's great to be alive. The skies are blue and crystal-clear and you can see for hundreds of miles. It's cool and brisk and wonderful. Unfortunately it seemed that when the weather was good in India, it was terrible in China.

In the early winter over most of the Hump good flying weather would prevail until, usually, late January, but then the southwest winds would begin coming in, increasing up to one hundred miles an hour, with resulting vertical drafts. During the late but short, sharp winter, one cold front after another would move down across India, to come up against the Hump with a bang. There'd be heavy snowfalls on the mountain peaks. Wings would ice up in the clouds.

Looking at the Hump weather on a year-round basis, it's easy to see that it was no picnic at any time of the year. The combination of weather and terrain would have made the Hump Airlift a difficult one even if the route had been over the middle of the United States. Actually, of course, it was located at the ends of the earth, and peopled with strange and dangerous tribes, including the Japanese.

Though we could hardly be termed a combat command, the Japanese did present a constant threat. They caused us the constant inconvenience of having to fly longer and farther over higher mountains in order to get around their salient pushing up from Rangoon to Myitkyina.

Their large-scale bombing raids were sporadic, and we usually managed to get advance warning. One morning in March, 1944, a C-46, piloted by a lieutenant named Clark, with Lieutenant Lucius as his copilot, took off for China with a heavy load of gasoline in drums and proceeded toward the first range at an altitude of nineteen thousand feet.

Ten thousand feet below the tops of thick, white cumulus clouds were reaching up toward them. Clark, scanning the skies routinely, suddenly noticed a formation of planes to the left and high. It appeared to consist of some twenty bombers and about the same number of fighter escorts.

"Hey, look," Clark said, nudging Lucius. "Reckon they're Japs?"

Lucius had no time to answer, for just at that moment, he saw two fighters coming in fast on them from the rear. There was no question as to their identity. They were Japanese Zeros. Even as Lucius hollered a warning, the lead plane peeled off and came barreling in, machine guns spitting fire. Over the roar of the motors came a sound the fliers had never heard before, but which was unmistakably the sound of bullets hitting the plane.

Clark acted instantaneously, by reflex. He pulled the throttles all the way back and shoved the control column full forward. The big C-46 went into a dive. Clark shot a quick glance to his left, saw the big red ball of the Japanese rising sun shining at him, and gave another yank on the throttle. But now he had another problem. With the big plane screaming earthward, the propellers were spinning so fast, pulling the engines along with them, that the engines might burn out. Clark tried to control the revolutions per minute with the switches controlling the props, but they didn't hold. He tried the manual prop control, and that didn't work either. The needle of the air-speed indicator was now all the way around, and stuck there. The engines were protesting, and to reach the cloud cover with burned-out engines would be little improvement. As a last resort Clark feathered the props.

Not many C-46's have been put through a two-mile dive. Safely in the clouds, Clark leveled off, unfeathered the props, and sighed with relief as the engines took hold. The engineer, Sergeant Horace Emrick, and the radio operator, Private Paul Witt, came up to report that the Japanese bullets had plugged several of the gasoline drums and the cargo compartment was ankle-deep in high-octane gas. Emrick had been tossed around in the plane during the dive and had a gash in the top of his head, but otherwise no one was injured. As Clark made radio contact with Chabua and reported the approaching enemy planes, the others began dumping the gasoline drums.

Clark headed back in the general direction of his base, staying in the clouds for cover. Beneath him, he knew, were the Naga Hills, and it was

a ticklish proposition staying above the tops of the cloud-obscured mountains but beneath the open, Zero-patrolled sky. As they flew along, they came to a large rift in the clouds and ventured out into it. A Zero was circling above. Clark turned his plane on the tip of its tail and skedaddled back into the clouds. They played this game of hide and seek all along the line of the Naga Hills. Finally, when the big plane peeped out of its cover, the air was clear of Zeros, and Clark headed across the Assam Valley toward home.

But now there was another problem to contend with. The right rear gas tank was registering too low, which was a clear indication that gas was leaking out through bullet holes. If this were true, the torching of the right engine on landing would surely ignite the fuel. And the whole plane reeked of gasoline fumes. All Clark could do would be to cut out the engine and make a single-engine landing. He radioed his base of his intentions, and proceeded on in. As the hastily assembled emergency crews watched and prayed, Clark slipped in for a successful landing.

And then he learned that, thanks to him and his crew, there had been good hunting over the valley that day. His first radio call had alerted the fighter command, and scores of our own P-40's had taken off and climbed high to await the oncoming visitors. When the Japanese flotilla came out over the valley, expecting to take the American bases by surprise, the American fighters pounced. It was a happy slaughter. Our boys shot down fourteen enemy bombers, with two more listed as probable kills, and fourteen fighters with three probables in addition. Twenty-eight sure kills out of a total of thirty-eight enemy planes. Not a bad day's work, and all due to the unarmed transport which gave the alert.

Most of our enemy troubles in the air came from single planes. Frequently, at both the advance bases in India and nearly all bases in China, a Japanese pilot would decide to make a nuisance of himself and come in to strafe the field. Sometimes they dropped anti-personnel fragmentation bombs.

In the early days of the Hump the Japs nearly bagged some real brass at Sookerating Base. One of the first in use, this base was constructed on the grounds of the old Sookerating Tea estate through the courtesy of the Dum Dum Tea Company. The main portion of the runway was laid out on what had formerly been a golf course and race track at which the British tea planters whiled away their spare time. When the field

was completed, the two highest-ranking officers in the theater, General Joseph W. Stilwell and General Sir Archibald Wavell, his British counterpart, made their first formal inspection of the base. As the entire party of officers was out on the runway, a flight of Zeros came in over the treetops, machine guns blasting. Slit trenches were conveniently available, and for a moment there, all the Japanese pilots could see were the seats of the pants and the soles of the shoes of generals and sergeants alike as they dived in.

At another part of the field near the three shiny new DC-3's which had brought in the visiting generals, a plane was being loaded with drums of high-octane gas, while its crew of one officer and one enlisted man stood by waiting. Without a second thought, the crew hopped in their plane and took off. Ducking and dodging, hugging the treetops and sliding through valleys, the plane proceeded on away from the field, pursued by the Zeros. Though bullets riddled the plane, it reached its destination safely, and in the futile chase, the Japanese had left the three shiny new DC-3's without a scratch.

Sometimes Japanese fighters followed a cargo plane in to strafe it and the field as it came in for a landing. At our field in Chanyi, near Kunming, several C-47's happened to come in at the same time early one evening, all with wing lights on, and were circling to land. The soldier manning the radio control tower at the time thought the Number Three plane in the circle looked a trifle odd in the evening dusk.

"Hey, you up there," he said into his mike, "Number Three in the circle. Who are you?"

No answer. The first plane landed, and the unidentified plane became Number Two. "Hey, you, Number Two," the operator shouted, again demanding identification. Still no answer.

And then the plane was Number One. "Number One, Number One, who are you?" the operator screamed.

Loud and clear a voice boomed out, speaking perfect English. "I'm a Japanese pilot in a Japanese plane, and I'm coming in with a load of brass!" the mystery pilot shouted, and came diving across the field dropping his load of fragmentation bombs one by one.

My commander in China was on the runway just ready to take off in his unarmed C-47. He heard the tower conversation and looked back just in time to see the first bomb dropping. He gave his engines full throt-

tle and roared down the runway with the bombs following him. He got off successfully but not without loss of a few heartbeats. After all the excitement, it turned out that no one was hurt in this raid.

One of the most successful enemy actions in the early days caused the operation a tragic loss in brave men and a resulting blow to morale. It happened on December 10, 1943. On that one day, two planes, operating as the newly organized Search and Rescue unit, were shot down. One of the planes was a B-25 medium bomber piloted by Captain John E. Porter, a colorful character known as "Blackie" to all the crews flying the Hump. Blackie, a former stunt pilot, was a dashing, excitement-seeking fellow who found a mission made to order for his talents in the early Search and Rescue organization. He surrounded himself with more barnstorming types who'd borrow or actually steal planes to go out on search missions, but he and his crew, known all over the Hump as Blackie's Gang, were by all odds the most colorful. Whenever flying between jagged peaks, down narrow gorges, or skimming over the tops of the jungle trees looking for crashes or survivors became boring, Blackie might just take a few minutes off to put a show of acrobatics on over a field, or to buzz and literally fly circles around the slower aircraft as they droned on across the Hump. Several pilots who did not seem to appreciate the humor of being missed by inches turned in reports, but Blackie was apparently never disciplined.

During one period Blackie had two C-47's assigned to his rescue outfit, and he had each armed with two Bren .30 machine guns. The copilot held one in his lap, ready to fire it from his window, while the other gun was kept in the cargo area. Members of the crew would open up the cargo door and blast away. At times they also carried .45-caliber Thompson submachine guns and hand grenades. On one occasion Blackie and his boys, in one of the combat C-47's, came upon a Japanese Zero sitting in a meadow, with the pilot making emergency repairs. Blackie circled, put the nose down, and then, firing his Tommy gun out his own window and his crew firing from the open cargo door, he roared past the sitting duck. That pass completed, he pulled the C-47 sharply up, as though it were a fighter plane, and came around again for another run. All in all, they made seven passes, killing the pilot and riddling the plane.

That night Blackie's Gang painted a Japanese flag on the nose section of their plane.

Less than a month later, with Lieutenant James Spain as copilot, Blackie went out on a routine flight in a B-25. Near the tip of the Japanese salient, the crew spotted three flights of Zeros and fighter bombers proceeding northward toward the Allied area of activity. Blackie radioed the fighter command and proceeded on. Not long after that he saw a flight of fighters approaching, and assumed they were the American planes he had summoned. He flew toward them, passing through a cloudbank. When he came out of the clouds he saw, too late, that the fighters were Zeros. They pounced on the plane and, despite Blackie's evasive actions, many of their bullets found their mark. The plane began to burn. Blackie gave the command to bail out, but the intercom system had been shot out, and no one heard him. He headed toward the nearest field, Zeros still hanging on his tail. One engine was gone completely, and flames were skirting back through the fuselage.

"Get out, get out!" Blackie hollered at his copilot. Spain tried to climb through the top escape hatch, but got stuck. Blackie, holding the burning plane steady, stood up and pushed him through. Spain shot back along the fuselage over the gun turret and between the stabilizers. He yanked the release ring and his parachute opened. He floated down safely the few hundred feet to earth. He was the only member of the crew to get out alive.

News that the dashing Blackie had fallen victim to the Japs could not help but have a deleterious effect on all the crews flying the area.

The Japanese were not only active in the air. They had patrols ranging throughout the area, and many of the native tribes were under their influence. Shortly before I arrived to take over the division, a C-46 flying north of Myitkyina with a cargo of gasoline and ammunition exploded when it was attacked by three Japanese fighters. Through some miracle, the three-man crew managed to bail out successfully, though they landed in an area covered by Japanese patrols. The copilot and crew chief were aided by friendly natives and got out safely. The pilot met three Burmese and gave them eight hundred rupees to aid him to reach safety. They took his money, then delivered him into the hands of the Japanese. The pilot was beheaded.

We learned of the betrayal from a report made by a native agent of

the British Intelligence. It read: "These Burmese, their sin was great. I have executed."

Routing planes to the north to avoid Japanese-held territory provided small comfort to the men flying them. Japs or no Japs, they knew that their chances of surviving were slim if they had to bail out, whether over the steaming, uncharted jungles of Burma or among the mountain crags. The most dreaded was the impenetrable, mysterious jungle. In that area of the world there were hundreds on hundreds of square miles of jungle so thick that crew members coming down only 150 feet apart would not be able to hear each other's cries. The rank growth simply absorbs all sound. I read report on report of men who were able to make voice contact with each other, then suddenly, for no apparent reason except the jungle acoustics, lost it. If they got out of the jungle at all, it was each man hacking his way alone, for hours, days, weeks.

One of the longest Hump walkouts I ever heard of was that of pilot Charles G. Allison and his crew of three, who spent ninety-three days walking out of the jungle. They were in splendid condition when they came out, although, Allison observed, "This is a hell of a way to get in shape."

Another crew, whose plane was blown far, far off course to the high Himalayas to the north, would probably have been willing to settle for a ninety-three-day walkout as they parachuted out of their disabled ship over that barren area of mighty upheaval. Instead, they were found by an English-speaking Buddhist monk who took them to "Shangri La," the forbidden holy city of Lhasa. They were told there that only five other Americans had entered the city. The Tibetans lavished hospitality upon them, and they spent several days in that strange place few outsiders have ever seen.

Such happy endings were rare. Ignorance of actual conditions and the horror of the unknown could make a dangerous experience a horrible and tragic one. I remember one particularly gruesome tragedy which bore this out. A young radio operator with the rank of sergeant bailed out of a crippled C-46, along with the pilot and copilot, over the Hukawng Valley. The pilot and copilot managed to walk out of the jungle in seven days. Search parties went in to look for the sergeant. Before they even found the boy's body, the sickening odor told the

would-be rescuers their search was hopeless. At the scene, the rescuers reconstructed what had happened.

He had come down safely through the trees, and had come to rest sitting in his harness five feet off the ground with the parachute caught in the trees above him. He shot his gun a couple of times, then, when no answer was forthcoming, prepared to get down out of the parachute. He loosened his chest trap and one leg strap, and either attempted to slide out of the harness that way, or lost his balance and fell. At any rate, he wound up hanging upside down, his left leg caught in the harness. His head and hands were on the ground, and the voracious red ants of the Burmese jungle began crawling on him and biting him. He frantically brushed away the undergrowth as far as he could reach. By this time the boy must have been in a panic. A vine-covered tree trunk was within easy reach. He could have climbed it with his hands and gotten himself in position to extricate his leg, but he made no effort to do so. Instead, he took out his automatic and began shooting at the strap which held his foot. He shot it away to the point where only a quarter of an inch remained, but he had only one shell left. The pain and horror of the ants swarming over him became too much to endure. The boy used his last bullet on himself.

Much of the dread of the jungle stemmed from its strangeness. We tend to fear the unknown. The native tribesmen of the region also were largely unknown, and, as a consequence, feared out of proportion, although, to be sure, there were some treacherous people in that part of the world. There had been some information collected from the few missionaries who had gone into the area before the war, but much of our practical information about the jungle tribesmen came from Hump fliers who had bailed out and encountered them. In the Indian hills on either side of the Assam Valley lived three primitive tribes, the Abors and the Mishmis to the north, on the frontier, and the Nagas to the south. The Abors were stocky and well-built, and both men and women wore their hair cropped with bangs like Moe of the Three Stooges. They wore handwoven but clean jacket-type garments, and were reported to be reasonably pleasant. The Mishmis, on the other hand, were sullen and dirty-looking. Both men and women wore their hair long, done up in an unbecoming knot on the top of their heads. Though hardly pleasant companions, they were not supposed to be dangerous.

The Nagas were known to be head-hunters. Although we knew of no case in which this barbaric custom was carried out on an American, the ever-present possibility did not add to the joy of bailing out over the Naga Hills. On occasion airmen downed in Naga territory were treated well. We reciprocated by rewarding Nagas who helped down airmen with one or more of many of the items they prized the most: drugs, salt, red blankets, or empty C-ration cans.

The jungles of Burma offered a greater variety of tribes, plus the possibility of Japanese patrols. The closer the tribe lived to the Japanese lines, the more prone were its members to betray airmen to the Japanese. By instinct, if not by order, most downed airmen walked north, away from Japanese territory. Even then there was danger of running into tribes who were warlike enough on their own, without benefit of the Japanese. And the area just over the first ridge from India was wild and forbidding even if no natives were encountered. The mountains rise sharply in cliffs thousands of feet high, and deep gorges with wild-flowing rivers traverse the area.

Further into Burma, although the dense, rank jungles continued, the Kachins proved to be more or less friendly. They classified the four belligerents as American, very good; British, good; Japanese, bad; and Chinese, very bad.

In northeast Burma live the Lisus. The black Lisus were definitely hostile, while the white Lisus were merely unfriendly. It was not wise to approach a Lisu village after dark, as at nightfall the villagers would set out cocked crossbows, with poisoned arrows, at strategic points covering the trails leading to the village. Spring the trigger, a vine strung across the path, and it was death—slow and painful and sure.

In the south of Burma lived the Shans, who were generally friendly, but numbered a few who were not averse to betraying Americans, or anyone else, for a price.

Once in China, the airmen would find nearly all natives friendly and most helpful. However, in the wild country of northwest China, over which our planes occasionally found themselves after violent storms, lived the hermitlike, primitive Lolos. The word *lolo* means basket: These people hang their dead in baskets from trees.

This report on the people of a vast region would have been much more difficult to prepare when I first arrived on the Hump. Much of the

information was gathered and collated after I assumed command. But we did know, at the beginning and even at the end, that we were sending Americans across difficult terrain, frequently swept by fierce and unpredictable storms, and peopled both by an enemy who murdered prisoners and by tribesmen of largely unknown characteristics.

All this added up to one question many a pilot asked himself when he started out over the Hump: What are my chances of getting back if I have to bail out? In the early days, the truthful answer would have had to be: Poor. Although there were good men, daring men assigned to Search and Rescue in the first couple of years, men like Blackie's Gang, and Lieutenant Colonel Don Flickenger and his parachuting medics, at best the early Search and Rescue activities were strictly cowboy operations. There was no real direction from the top. On occasion, a Search and Rescue airplane actually loaded for a rescue mission and, waiting for clearance, would be called back, the rescue equipment unloaded, and the plane prepared for a cargo flight over the Hump. When such activities became known—and you can bet they did become known—the effect on the flight crews who might be dependent on that operation could well make the difference between a successful flight and an unsuccessful one. When men are pushed to the limit of human endurance, flying planes pushed to the limit of mechanical endurance, it doesn't take much more to render them ineffective in a crisis.

Many of these men were sick in the first place—physically sick. The flood plain of the Brahmaputra is the finest breeding ground in the world for the malaria-carrying anopheles mosquito. Unfortunately, just after an ATC Malaria Control Unit began getting results in the spring of 1943, a jurisdictional dispute developed, and the Theater Headquarters sent in one corporal from the Services of Supply to take over the work. For some time all malarial control efforts were stymied and, of course, malaria increased.

Diarrhea and dysentery were also prevalent; sanitation was a mess. And water! Here's a description of the water in use at a Chinese base, as contained in a sanitary report:

> The idea behind boiling water pumped from the Luliang river, which is reputedly infected with the amoebic cists and possibly every form of disease known to China, is basically sound; but this water requires further conditioning. All along this river and mainly

around the unbelievably filthy city of Luliang, Chinese natives constantly use this water, before it reaches a point of departure for this base, to relieve themselves and wash their lice-infected clothes. The writer has personally seen dead bodies floating in this water at a point above the original source of the base water supply. Such raw water is pumped to open tanks located at several places on this base and is carried in buckets by coolies to oil drums placed on platforms adjacent to wash rooms. Most of these buckets and tanks leak profusely and cause muddy pools of molded and gangrenous water to stand near all final sources of bathing and cooking water systems. Many, or most of the coolies transporting this water over long distances by low-slung buckets, are ridden with markedly running nasal infections. They constantly blow their noses without the aid of handkerchiefs and spit large spots of coagulated and infected sputum over their entire route of travel with water.

Bathing water used by personnel of this base is dangerous to the health of American soldiers. For several days after a rain, the water that comes from the pipes is a rich red mud color that offers no aid to cleanliness and when combined with soap appears to resist emulsification and the soap soon segregates itself into small muddy flakes.

Water used for sterilizing dishes in the various mess halls is, in fact, a form of soup with a basic foreign element of well-cooked feces and red mud. The undersigned personally would hesitate to wash his feet in the same water in which we are forced to sterilize our dishes.

Mountains and jungles, Japanese and head-hunters, storms and icing, mosquitoes and filth—I had no picnic ahead of me, that was sure. And yet, when I reported in to General George after my first quick trip in June, I was confident that we could fulfill the double mission of increasing tonnage and decreasing accidents. I had an ace in the hole. I'd been thinking of the little stroll I'd taken at the advance base in Assam. After seeing the conditions in which American airmen lived and the slothful appearance and undisciplined attitude of the men themselves, I had a pretty good idea wherein much of our problem lay. After that exhibition, I would almost expect the command to have a high disease rate. It followed that whatever rotation policy was in effect, if any, would be overly harsh and not fairly administered. Food would be miserable, both

in basic quality and preparation. PX supplies would be short. There'd be little recreation facilities, no entertainment, little provision made for the men to see more of one of the world's most fascinating countries.

The blame for these conditions could by no means be laid at the doorstep of my immediate predecessors. Geography was against them all, for one thing. On the world maps that hung on office walls in the Pentagon, and in the minds of the men who looked at them, the Hump was far and away at the end of the supply line. The closest distance to the good old U.S.A. was straight down. In many respects the entire command was just plain forgotten. If I may jump ahead of my story a little, I'll give an illustration. On Thanksgiving Day, 1944, I was flying up to our most advanced base, Dergoan, when I heard on the regular news broadcast that the Armed Forces were providing turkey for all American troops overseas that day.

I licked my lips and grinned at Dan Wheeler, my aide. "Hope they leave some for us," I said, "I wouldn't mind a bit of that turkey myself."

"You and me both, sir," he said.

We put down at Dergoan just before chow time, and by the time we finished up at Operations it was time to go and claim that turkey. We hurried over to the mess hall. Strangely, however, it seemed we were the only people in a rush. I saw no long line of GI's clattering their mess kits, nor contented soldiers and pilots strolling away, rubbing full stomachs and puffing on holiday cigars. About the only thing I did notice was a pervading odor of sauerkraut.

"Smell that sauerkraut?" I asked Wheeler. "I never heard of serving sauerkraut with turkey before."

"Neither did I," Wheeler said. "But I'm beginning to smell something that goes with it—wienies!"

And sure enough, that's what we had for Thanksgiving dinner—sauerkraut, wieners, and, on that blistering hot day, some tepid cocoa. Where was the turkey? Where was all the rest of it? Ha. This was the Hump. We were at the end of the line.

These problems brought forcefully to my mind the incidental responsibilities a military leader gathers when he tries to do the job he was sent out to do. He often finds he has to handle the incidentals first, before he can even get on with the primary task. I thought how vastly different it is in the civilian world.

Businessmen are not required to take care of their employees on a twenty-four-hour basis. They do not face the tough living conditions, the shortage of food, clothing, PX articles, and the rest, which the pipeline from the States had been supplying in only a trickle. Then the executive of a civilian airline has no reason to concern himself with what his employees do between 5 P.M. and 9 A.M. the next day, so long as they stay reasonably well out of trouble and scandal, and show up in satisfactory condition to do a day's work. But a military commander is responsible for his personnel, and their activities and facilities, around the clock. In the India-China Division our men were a long, long way from home. Their wives and mothers were not available to put a hot meal on the table for them, make up their beds, send their clothes to the laundry. There were no restaurants, no movies, and at many bases, no towns. Next to the combat soldier in the foxhole, these poor guys in their thatched *bashas* were about as bad off as a man in service could get.

Any officer who has commanded troops, be they soldiers or airmen, sailors or marines, knows that when his men are proud to be Americans, proud to be a part of their service, proud to be themselves, he has his problem more than licked. I was fortunate in that before taking command I had the opportunity to put my finger on this problem of morale. And I knew what to do about it.

I arrived for duty in early August. It was a sweltering hot and humid Calcutta day. Not one breath of breeze was blowing, and the driver of my car showed me his prickly heat as though it were leprosy. I soon found out that just about everybody came down with it during the moist, torrid summer months. At headquarters, a sprawling complex of buildings in the outskirts of Calcutta known as Hastings Mill, a group of glum-faced officers in sweat-darkened shirts and trousers awaited me. If they expected any radical change in flying rules for either better or worse, they were disappointed. I had decided that, with one exception, the rules pertaining to flying the Hump would stand until I had a good chance to look at them. The exception was the dictum, "There is no weather on the Hump." One of my first orders was to the effect that weather was a factor which every Operations Officer would consider in dispatching aircraft.

At the first opportunity I got together with Hammie Heard, my advance party, for a quiet, informal estimate of the situation.

"Sir," he said, "I have never seen nor heard of people living—existing—as they do here and out on the operating bases. This is grim. Nothing counts but the tonnage that goes over the Hump. Morale is at the shoelaces. Everyone wants to go home—getting out of here is all they think about and talk about."

I looked at him a moment. "You've been here for some weeks now. Where's a major trouble spot and what shall we do about it?"

"Right here at headquarters, sir," he said. "Headquarters used to be located at New Delhi. It was much more pleasant up there, but it was over a thousand miles from the Hump, and General Hardin wisely moved here to be closer to the scene of operations. The only thing available was this old jute mill. Living quarters for headquarters personnel are long, low brick buildings with practically no windows, no ventilation. They're sweltering hot. It's impossible to sleep. The men get up during the night and soak their bedclothes in water, then lie down again between the wet sheets. It's worth that trouble just to be cool for a few minutes."

"Is there any way we can open up some windows, enlarge what openings there are?" I asked.

"Yes, sir," he said. "That would help a lot. But what would really help would be some big fans and something to get rid of the bugs."

"All right," I said, "get going. Knock down walls, partitions—whatever's necessary to get some air in there. I'll have Temple requisition the biggest fans available, and we'll get them on the Fireball Express immediately—if I have to go directly to General George. And I brought five hundred pounds of the first issue of that new drug, a bug eliminator called DDT, over in my plane. Now tell me something, Hammie. You mentioned everybody else's morale—how's yours?"

He grinned.

As I have detailed earlier, one of my first actions was to fly the Hump. It was something I had to do. We had made the flight from the same base I had visited on my first trip to India. When I got a chance I shook off any would-be escorts and strolled back to the same area of *bashas* that I had visited on my first trip. They were as bad as they had been before, and the off duty men lounging around in front of them were no better.

I walked down the street, stopping at each *basha*. "Hello," I'd say to each group, "I'm General Tunner."

I received the same reception as on the previous visit. Some looked

up with an obvious "So what?" expression; only a few rose to their feet. The worst-looking sad sack of them all, a shaggy specimen who seemed to be in a kind of stupor, neither stood up nor looked up when I greeted him.

"How long have you been here?" I asked.

Some of his early training must have come back to him, because he struggled to his feet. "Sir," he said, "I been here since the spring of 1942."

"Why haven't you been rotated?" I asked. "Do you like it here?"

"No, I don't like it here, but I can't get anybody to listen to me."

"What do you want to do?" I asked.

"Sir," he said, "I want to go home."

"All right," I said, "you can go home. Go pack your bag and get ready."

I went on to the next *basha.* When I finished there I looked back. The man I had talked to was still standing there, scratching his head. I went back to him. "What's the matter?" I asked. "Can't you get your bag packed? Do you want me to help you with it?"

He just looked at me.

"Listen," I said, slowly and plainly, "there's an airplane leaving here in thirty minutes for the States. I want you on that plane, understand? *You're going home!*"

And he did. Aside from humanitarian reasons, aside from morale, from a strictly military standpoint it did no good to keep men like that in the theater. It so happened he was a mechanic. Who would want to fly over mountain peaks, dense jungles, and head-hunting tribes in an airplane he had been working on?

But more important, that one homeward-bound GI was a symbol of a whole new command attitude. You can be sure that before long everybody on the base had heard about the new general telling ol' what's-his-name to pack his bag because there was a plane leaving for home in thirty minutes. But though I admit to a certain amount of theatrics, this was no mere gesture. I saw to it that a fair and dependable system of rotation for everyone was put into effect. It was not an easy system to work out, I discovered later; one policy had to cover different classifications of men with different qualifications. Punchy as that mechanic with over two years in India had been, he still could hardly have been less

effective in his assigned task than a pilot or copilot would have been in even less time.

As a matter of fact, a fixed rotation policy for Hump pilots was in effect when I took over. The requirement was simply that they fly 650 hours. Some were flying 165 hours per month, in order to get home in four months—if they lived that long. From every standpoint this was far too much flying time in one month. Shortly after my arrival Colonel E. D. Abbey, my staff surgeon, informed me:

"Increased flying hours for our crews on the Hump has resulted in a critical situation. Fifty per cent of the crew members are bordering on a frank operational fatigue. Several recent accidents are directly attributable to flying fatigue. It is impossible for flight surgeons to evaluate every case, and some men continue to fly because of the urge to fly their required time and return to the States."

As a result, at the same time that I was going through the entire division with a fine-tooth comb, sending home men who had been too long in the theater, I deliberately increased the amount of time the flying officers would remain in the theater and increased their required number of hours to 750. Both conditions—a year and 750 hours flying time —were required before a pilot could be rotated home. It didn't make the pilots happy, but with no longer any need to average more than 65 hours per month, I do think it kept quite a few of them alive.

Fair administration of the new rotation policy made Hump tonnage look bad for a month or so; I had to send home so many key men that tonnage decreased. But I counted on making it up, and more, through the improved morale which would result from the proof that every man was being treated fairly. And it turned out that I was right.

Even announcement of the new rotation policy couldn't compare with the real bombshell I dropped next. I brought military discipline, and all it entailed, to the India-China Division. Those filthy *bashas* which had never been cleaned—I ordered them cleaned and given a full-dress inspection, with an inspection to follow every day. The officers' barracks would be inspected once a week.

And on Saturday, I ordered, *each base would have a parade.* I suppose that many base commanders and their staffs read that one over a couple of times, incredulously. There had never been, to my knowledge, a United States Army parade on Saturday in either India or China since

the Hump operations had begun. I learned later that some of the base commanders threatened not to have the parades, and that bitching was rampant. This did not phase me at all. I knew none of them would carry out their threats, and as for the bitching, let them. It just so happened that I had served as a second lieutenant in the United States Army Air Corps for seven long years, longer than the total time many of these colonels and lieutenant colonels and majors had put in service. When it came to bitching, with that background I'd take second place to no one in the theater.

I went ahead with my full-scale program. The men stood inspection and marched in parades and shaved their faces and cut their hair and spruced up both their personal appearance and their living quarters. Military courtesy was no longer just a phrase. Not long after I assumed command, General Smith came over to see what was going on. I escorted him around the division, with prior orders to every base commander to have a parade in his honor. When he left for Washington, he told me, with a wry grin, "It's about time I was leaving. All the time I was here last year I didn't have to return a single salute. Now I'm lucky to get out of here before my arm drops off."

As the weeks went by, the change that was taking place in both the officers and men became apparent. Though quarters might be thatch-roofed *bashas,* with dirt floors, they were now kept as clean as the decent American homes from which these boys came. Though the first parades may have been composed of slouching, self-conscious, and diffident men, you could see, each Saturday, a little more stiffness in that backbone, a little prouder tilt to head and shoulders, a more purposeful swing in the arms. They were beginning to look like American soldiers, and that was just exactly what I wanted. I had been sent to this command to direct American soldiers, and while I was their commander, by God, they were going to live like Americans and be proud they were Americans.

I was by no means unaware that a positive result of this new-found cleanliness, pride, and patriotism might well result in increased efficiency and performance. I had been taught it at the military academy and had learned it through personal experience as commander of the Ferrying Division—bases that were well run, clean, orderly and soldierly did a better operating job. Where the training schedules were strict and the

supervision of messes and barracks firm, the personal attitude and the morale of the troops was good and the results gratifying. And this was true all over the world.

But this stern supervision is only a small proportion of the function of command. It's not a one-way street. While the lower echelons work for the mission of the commander, he must work for them. And there were a hundred things to do.

I'd already seen to some of them. Certainly one of the services a commander can perform for his men is to help them stay well. When I took command, I found that although we were operating in areas infested by myriads of malarial mosquitoes, discipline was so lax that a high percentage of the men were not even aware that their bases were located in a malarial zone. The medical department had repeatedly attempted to put in a theater-wide program of malarial control but hadn't gotten very far. When I gave Colonel Ed Abbey, my chief medical officer, free rein, he and his officers and men went to town. Probably the most effective means of control of the anopheles mosquito was furnished by the malaria spraying flight, more popularly known as the "Skeeter Beaters." Operating out of stripped-down B-25 bombers, the spraying flight eliminated 90 per cent of the mosquitoes in the area. Proper practice of malarial control by the individual men in the division —use of repellents, mosquito nets, and Atabrine—combined with the work of the Skeeter Beaters to drive down the prevalence of malaria to the lowest rate of any military organization in the India and China theaters of operation.

Our businesslike methods worked beautifully on the Hump, thanks in great measure to the fine staff of industrious and intelligent officers I was so fortunate to have. Temple Bowen proved to be all that I had ever hoped for, and even more, as I was able to move him into the deputy commander's slot almost immediately after moving to India. I was constantly on the go, visiting our bases in both India and across the Hump and meeting with General Chennault and other officers in China. On one occasion I made what was then the world's longest scheduled flight, from India across thousands of miles of water, bending around Japanese-held Sumatra and Java, to General MacArthur's headquarters at New Hollandia. Whenever I was away from headquarters, it was a great relief to know that Temple was carrying on for me. When

it came to accidents, he was particularly tenacious. At the first report of an accident Temple would immediately contact the commander of the field at which the plane was based, by telephone if possible, and demand an immediate explanation, complete and detailed.

The 8 A.M., seven-day-a-week staff meeting proved itself. The staff officers enthusiastically put in what time was necessary to get the job done, whether or not it required more than their normal work day of twelve hours, Monday through Sunday. I filled in the skeleton staff I brought from the States with officers already in the division. Colonel Earl Hamm took Temple Bowen's place as Service and Supply officer and did a thoughtful job.

A young captain named Eddie Hastings was already serving as Intelligence Officer of the division. Eddie had been connected with Cook's Tours in the Orient before the war, and had guided parties through both India and China. He had more knowledge of India and China than any other officer in the division. He was sophisticated and always impeccably attired—you'd never catch Eddie with a speck of dust on his shoes. He was always cheerful, the greeter type, and yet at the same time he was thorough and efficient.

I never knew exactly how Eddie went about his mission, but I do know that the intelligence he picked up concerning the enemy was always correct. And it was vital. The primary mission of the Japanese air force in Burma was to hamper our work—bomb our fields, intercept and harass our aircraft. In the late summer of 1944 Hastings learned of the Japanese intention to throw an all-out effort against us, beginning in October. At that time I was just getting ready to inaugurate C-54 flights across the lower, more direct, southerly route. The planes would cross over 150 miles of enemy-held territory and would be well within the range of enemy fighters. On Hastings' advice I urgently requested General Stratemeyer to provide adequate fighter protection for our unarmed transport aircraft. The fighters were provided, and enemy action was of little consequence.

Bob White did the superb job I expected of him. His inexhaustible enthusiasm for production-line maintenance proved irresistible. Soon every engineering officer on every base was enthusiastically going about putting in PLM. Bob went about the command exhorting, inspiring, and checking, and I backed him completely. I constantly inspected

the maintenance operations, probably devoting more time to this activity than to any other. I was no expert, but I could recognize efficiency and results, and both were there for me to see.

One of the bases at which White rubbed together with the engineering officer and produced sparks of achievement was Tezgaon. The engineering officer there was Major Jules Prevost, who went on to become the engineering officer of the Military Air Transport Service.

With Bob's encouragement, Jules did a great job at Tezgaon. His PLM soon had the forty C-54's assigned to the base averaging out at twelve hours flying time a day. He was able to send the big planes through this line in twenty-two hours. I'm looking at the blueprints of his operation at this writing, and they show a beautifully well-knit operation. Here is the work schedule of each station:

Station No. 1: Initial engine run-up; general inspection of airplane and its forms; work planning.

Station No. 2: Airplane wash and polish, inside and out; cowlings removed, engines sprayed and cleaned; sumps drained, etc.

Station No. 3: Carburetion; communications; propellers and anti-icer system.

Station No. 4: Power plant, ignition system (removal of plugs), lubricating system, power section, accessory section, engine controls; oxygen system; painting of placards and insignia; rigging and surface controls.

Station No. 5: Instruments; automatic pilots; electrical system, engine section, fuselage section, cockpit section; hydraulic system, landing gear (including retraction); wheels and brakes, tires; de-icer system; general lubrication.

Station No. 6: Final inspection; replacement of operational equipment.

Station No. 7: Preflight, final run-up, servicing.

Tezgaon was also the proving ground for another innovation. In the early days of my command, I was constantly struck by the fact that we were always requisitioning more personnel from the States, espe-

cially mechanics. Yet each base was set down in the midst of innumerable native villages and towns teeming with men who seemed both idle and hungry. Here was a great source of man power, completely untapped. Tezgaon, in addition, was only a few miles from the large city of Dacca in Bengal, now East Pakistan.

In production-line maintenance there are many uncomplicated jobs. Why couldn't some of them be given to native labor? In this way we could free our skilled personnel for more complicated tasks and at the same time contribute to the livelihood of the local people. I asked Ike Teague, my personnel officer, to get together with Bob White and look into this area.

"An important part of production-line maintenance is cleaning and washing the airplane," I told Ike. "It's an onerous task that requires a lot of men. Here is at least one job in which we should be able to use native labor."

Over the next few weeks Ike gave me several progress reports on the native-labor project. He worked out an arrangement by which the British paid the salaries of our Indian workers through reverse lend-lease. Native labor was increasingly utilized until, of some 225 men assigned to the Tezgaon maintenance line, to take just one base, 85 were Indians. Most were assigned to the washing rack, but others performed more complicated tasks. One day Prevost reported proudly to White, and White reported proudly to me, that he now had natives removing all the spark plugs from the engines on routine inspections. The base at Sookerating reported Indians assigned to the paint shop and doing well while selected ones were working in engine build up, eagerly learning to strip, build up, pre-oil, and pickle engines.

Natives were also brought in to other phases of the entire operation, particularly in the housekeeping department. We eventually employed fifty thousand Indians and Chinese on the Hump, and with excellent results. Many of the problems I had been warned against simply did not materialize. I had been told to expect sabotage and treachery, but never, not only on the Hump with Indians and Chinese, but in subsequent years with Germans, Japanese, and South Koreans, did I experience one single case of sabotage involving the native sons. I had also been warned that the obviously poverty-stricken peasants of India and China would prove to be of inferior intelligence. We quickly found out that their poverty

was no indication whatever of inferior intelligence. As for the problem of communications, getting the idea across to the native people as to what they should do and how they should do it, it was with us only when no interpreters were available. In India, we hired English-speaking *baboos* (foremen), and everything worked out well.

One problem we could never lick completely was petty pilferage. It would take an Indian or a Chinese laborer but a second to slit a bag of rice, flour, salt, or sugar and scoop out a handful. Frequently a good portion of the contents of the bag would spill out in total waste as a result of the theft of that one tiny portion. We brightened our corner of the world, too, for natives living in the areas around the bases would frequently tap onto our electric wires, using wire that had probably been stolen in the first place to make the tap, to light up bulbs that were also stolen. One enterprising Indian neighbor tapped onto a telephone wire by mistake. The only time he could get even a faint glow on his stolen bulb would be when somebody was cranking the magneto to ring up somebody else on the line. It's a wonder he didn't come in and complain.

Our base at Barrackpore north of Calcutta was patrolled by one of the most unique police forces in the Army Air Forces—a group of 259 Indians recruited from pension policemen, veteran soldiers, and retired Indian army officers. They were divided into four companies, one composed of Ghurkas, one of Sikhs, one of Pathans, and one of Hindus, each under the command of an American enlisted man. The American noncoms conscientiously studied the religion, customs, and language of the men in their companies, and could give them a verbal pat on the back—or chew them out—in their own language. Petty thievery decreased noticeably after the Indians began patrolling the beat.

When a few of the natives distinguished themselves, it was considered both wise and fair to promote them to a position of leadership. But what would their title be? Someone suggested "chief constable," which had a nice ring to it. Promotions were not accepted with the alacrity we had anticipated, however. After some discussion the reason came out: They didn't like the title of chief constable. We then invited suggestions for another title. Several were made and bandied about, and then came the one that got unanimous approval: assistant sub-inspector. To win promotion to assistant sub-inspector they'd go through hell. The whole

business was typical of the people of India. They were solemn and serious. The Chinese, by contrast, were happy-go-lucky individuals.

One native employed in India brought in some valuable publicity. We were short of all kinds of equipment there at the end of the world. Naturally, we kept up a steady barrage of requisitions, but too often they were ignored. One of our prime needs was for more loading equipment. One day I happened to drive by an Indian plantation and saw several elephants at work in the fields.

"Hmmn," I said to Dan Wheeler, "I wonder if one of those elephants could be trained to load a drum of gasoline on an airplane?"

"I don't see why not," Wheeler said.

I suggested to the commander of the Misamari base that he find an elephant, complete with *mahout,* and have the beast put through a basic-training course in airplane loading. The elephant was found, and, inasmuch as she was a member of the fairer sex, promptly named Miss Amari. She quickly learned how to get her tusks under a drum of gasoline, hold it in place with her snout, pick it up and roll it in the plane's cargo door. I had photographs taken and given to the news agencies. Pictures of Miss Amari ran in newspapers in America from coast to coast, and for a while there we weren't so forgotten. You can bet that several official photographs of Miss Amari at work got into the hands of General George, with a respectful comment to the effect that if we had more pieces of American-made equipment we wouldn't have to use Indian elephants. The gasoline drums Miss Amari lifted were made right there in India, by the way, as just another part of the operation.

Just prior to my arrival, a report had been made to the effect that something ought to be done about the Search and Rescue Unit. At the time, a few dedicated men were carrying on a cowboy operation under the very general supervision of the wing commander at Chabua. Though brave and hardworking, the members of the unit just didn't have the authority to conduct operations in an efficient manner. The matter got all the way to ATC headquarters in Washington, but there it bogged down in administrative details. One of the first things I did was to set up a series of consultations on this vital question with every other Air Corps Command operating to any extent over these areas. We came away with the agreement that one agency should be made responsible for the centralized and consolidated operation of all Search and

Rescue work, and that this one agency would be the India-China Division. Washington approved, and I assigned Gordon Rust, my division intelligence officer, to supervise the establishment of a thoroughgoing, efficient Search and Rescue organization. He did. To handle the details he found a crackerjack of a commanding officer in Major Donald C. Pricer, who had flown the Hump as a pilot for over a year before becoming Operations officer at the Mohanbari base. Pricer selected his own personnel, and my headquarters approved their transfer to him. He started with a nucleus of twelve officers and forty-four enlisted men, who went to work with enthusiasm for the job. Within a month the strength was doubled, and I assigned to the unit six aircraft, four B-25's, a C-47, and an L-5. These planes, and all subsequent planes coming under the unit's command, were painted Air-Corps-blue and orange-yellow so they could be easily spotted.

We now had an efficient, military Search and Rescue Unit dedicated to its task on a steady, thoroughgoing basis. This entailed, for one thing, the pin-pointing of every existing sign of wreckage beneath, and the educating of all crews flying the Hump to report all signs of wreckage. From then on, all new crashes could be systematically attended to without wasting time on rechecking the old ones. This in itself eliminated much duplication of work, for, after all, aluminum was scattered the length and breadth of the route.

With the unit on a well-organized and functioning basis, it could now undertake such complex operations as the rescue of Technical Sergeant Marvin H. Jacobs. Jacobs had been dozing peacefully in a C-46 en route from Chabua to Karachi one night when, suddenly, he felt a jolt. The next thing he knew he was lying on a steep hill, in the dead of night, with a broken leg. In the morning a group of Dufla tribesmen, hearing his cries, hacked their way through the bamboo thicket to him. They were friendly and co-operative, but Jacobs was in too great pain to appreciate them. For two days he refused to permit them to lift him.

Finally the little group of natives helped him over rough terrain to the wreckage of the plane. Though only half a mile, the journey took a full day. In the plane's wreckage were the charred bodies of thirty-four other persons. Despite the gruesome surroundings, Jacobs felt he had more chance of being rescued if he stayed by the plane. One food kit was found, and that was all he had to eat until, on the sixth day after the crash, he collapsed. The Duflas built a litter and carried him to a small

village. Runners went out on the two-day journey to the tea estate, which radioed the news. The first thing next morning, two members of the unit, Lieutenant William F. Diebold and Sergeant Brenner, parachuted from a C-47 and found Jacobs alive but in bad condition. He was emaciated, dehydrated, and running a fever. He had lost blood through numerous cuts, and was in great pain from the fracture of both his lower leg and foot, which had become infected. They radioed for a medical officer, and Captain A. E. Lamberts parachuted and reached them just fifteen minutes later. He gave Jacobs plasma, fluids, and food, in addition to dressing his cuts and the infection, and for the first time in eight days Jacobs began to feel less than miserable.

The tiny village was located in the wild country along the Tibetan frontier. It would take weeks to get Jacobs out of there on a litter. No helicopter was available, and so a light plane, an L-5, would have to be employed. But the only spot anywhere near level in the entire area was surrounded by huge trees. The prospective field itself was thick with smaller trees and stumps. This called for a full-fledged engineering operation.

The Search and Rescue Unit rounded up a number of picks—no shovels were available—and ten cases of dynamite. The three Americans and a hundred men, women, and children of the Dufla tribe set to work with a will. In seven days the big trees and the stumps had been blasted, and the natives had leveled the runway by carrying dirt in their hands. The good news was radioed out, and soon a flying armada of six planes appeared and circled the area, giving the natives a thrill. An L-5 came down low to explore the best route to the field through the surrounding mountains. Finally it came in, flying around one mountain, up a valley, over a saddle, and down for a bumpy but safe landing. Sergeant Jacobs was loaded aboard, and as the onlookers, natives, and Americans alike held their breath, the pilot gave his little plane the gun and it jolted along the runway. At the very end it finally took the air. The plane came back next day and picked up Captain Lamberts, but further landings were considered too dangerous. Lieutenant Diebold and Sergeant Brenner had to hike out.

A solid, hard-working unit that any commander could be proud of, Search and Rescue now increased its duties by producing a monthly bulletin. It disseminated much valuable information concerning pro-

cedures in jungle travel and hints for forced-down crews and fighters. It was obvious now that the Search and Rescue Unit was operating on an efficient, businesslike basis. Surely this lessened some of the qualms of the men flying the Hump.

In addition to the fully justifiable fear of all the known dangers of the Hump, there was another, the fear of the unknown. Few Americans had ever been close to a jungle before, and its dark mystery naturally produced a sensation of dread. The only way I could see to dispel this fear was to strip the jungle of its secrets. After weighing this problem heavily with my staff, I ordered each base to establish a jungle indoctrination camp, in which our men could see and explore the jungle themselves, under the guidance of trained jungle scouts. The camps were deliberately designed to provide an interesting respite from the rigors of routine flying duties as well as jungle indoctrination. I had extended the stay of pilots and flight crews in this country, and it was only fair to give them a little variation from their dangerous routine.

Most of the men found their stay at the camp primarily a practical and worthwhile education. Under the guidance of expert woodsmen our pilot-vacationers were taken on expeditions into the wild country that surrounded the camps. Hiking through the jungle brought the trainees face to face, often for the first time, with the dense undergrowth and perpetual shade. They saw the beauties of the tropical vegetation as well as a few of the unpleasant features, such as the myriads of flies and mosquitoes, the leeches, and other inhospitable denizens of the jungle. They were shown which fruits and plants were edible, which were poisonous. They learned the easiest way to travel through the jungle, how to travel across country without getting lost, and how to use the equipment in the jungle kit with which every plane was equipped. They learned not to get panicky, to keep their heads.

Some camps were located near the mountains, with chilly mountain streams making their way down narrow gorges, over rapids and waterfalls, from their sources in the snow-covered peaks of the high Himalayas. Here our men learned to use the rubber life rafts every plane carried as emergency equipment.

On trips to native villages our men could meet people generally similar to those found in the areas in which they might bail out. By means of signs and symbols they could learn how to converse with these natives,

and thereby acquire confidence in their ability to make their wants known in case it should be a matter of life and death.

Many of the men were eager to go on the night hunting expeditions we made possible for them. Not every American soldier in World War II had the opportunity to experience nightfall in the jungle along with a trained guide who could identify the mysterious sounds. Lying in machans, woven platforms fastened securely to branches of trees, the men could frequently see wild game pass close by—deer, elephants, leopards, wild boars. Under these controlled conditions, you quickly learned that you could share the jungle habitat with these creatures as long as you did not molest them and kept out of their way. Dangerous? Certainly, but only to the man who did not know what he was doing.

The primary purpose of the camps was excellently served. Many a pilot told me personally that bailing out into the jungle was no longer as fearsome a prospect after a stay in the jungle-indoctrination camp. For one thing, he knew he wouldn't starve, for there were wild chickens and peafowl everywhere, and he'd learned how to bag them. To all it was an interesting experience, and to many—those who deliberately chose to go out and live in the jungle and from the jungle during their entire stay—it was fascinating.

For those men who didn't want to spend any more time in the jungle than the course required, we provided all kinds of sports—volleyball, horseshoes, badminton, tennis, Ping-pong, croquet, as well as swimming, motorboating, and fishing. If you didn't want to do anything at all but lie around in a hammock and read, well, that was O.K. too. For the real seekers of pleasure, we took over hotels in Bombay, Lucknow, and Calcutta, where the pleasures were almost sybaritic—a far cry from the *basha* living at our remote Assam and Bengal bases. India is a strange and exotic country, a land of great beauty, but also a land of great extremes. As long as our men were there, I considered it a command function to make it possible for them to see some of the fascinating sights.

One of the larger camps, Gaya, had an additional mission. My flight over the Hump, together with a study of accident reports, convinced me that to fly the Hump without intensive preparation for it was at the least foolhardy. I resolved that I would be the last to repeat such a stunt. We set up a routine procedure in which the new pilot coming into the theater would first take a short jungle-indoctrination course, then fly the

Hump a few times as copilot, then undergo his final training for first pilot.

The reason General George sent me to the India-China Division, however, was not to arrange for sight-seeing trips and training schools, but to increase tonnage and cut down the high accident rate on the Hump. Alarm had been increasing in Washington over the loss of Americans in the China-Burma-India theater, complaints piling up in the offices of senators and representatives.

From the very beginning, my staff and I had given major consideration and attention to the Flying Safety Program, now greatly augmented and encompassing all phases of the operation. To speak basically for a moment, the primary purpose of the Flying Safety Program was to prevent accidents. Accidents are predictable, therefore preventable. Thus the mission of Flying Safety was to anticipate and promptly correct conditions leading to events which would cause accidents.

Flying Safety came up at every staff meeting, and not only within the narrow confines of the Operations Section, which controlled the pilots and maintenance, but the other sections as well. Generally the program sifted down to four main topics:

The investigation and analysis of existing flight procedures and practices and of maintenance procedures and practices.

The statistical investigation and analysis of accidents.

The sound recommendations for the correction of faults as revealed by the foregoing.

Prompt action and follow-up on that action.

Much of what we worked out in that pioneering Flying Safety Program on the Hump has now become routine and is to some degree technical, so I will not give here a formal paper on our program. But perhaps a brief discussion will give some idea of its scope.

First, we learned to investigate fully and completely *the training of our pilots.* We ran a careful and complete investigation on every pilot to make sure that he had received adequate training, had been screened, and that he was familiar with, and competent to handle, the particular types of aircraft to which he would be assigned under all conditions anticipated in the performance of his duties. I could list here scores of individual flying operations with which we made sure every pilot was familiar, such as proper procedure in take-off and landing in cross winds,

knowledge of the aircraft, its engines and its instruments, its limitations and its loads. Nothing was taken for granted, and too often we were proved right; not all pilots knew all they should have known. No matter if the incoming pilot had been a competent first pilot in some other division of the ATC, we made sure that he knew his job before he became first pilot on the Hump.

Flying Safety comprised:

Weather—means of combating such conditions as icing and turbulence, computing wind velocity in good weather and bad.

Communications—use of the radio compass, the radio limitations with which we were forced to live, when to use the Air Force cry of help, "May Day," and when not.

Pilot discipline and airport discipline were important. Example: The check list, which must be in every plane and to which every pilot must refer. It tells him the exact procedure he must follow from the time prior to starting the engine to that following his cutting it off at his destination. We found planes without check lists, and pilots who didn't bother. Both situations had to be corrected.

Briefing and debriefing proved to be of the greatest importance. Briefing involved not only a thorough preparation of the pilot for the route he was to take, but a check to make certain that the crew was competent to make the proposed flight safely. Debriefing would show up incompetent operational flight procedures, indicating the necessity for corrective action and additional training. Debriefing also provided our best weather reports.

Maintenance was a whole area in itself.

Airport facilities. This area may seem obvious, but airports do not take care of themselves, as I discovered at Myitkyina. The report came in that there were rocks on the runway of such size that they were blowing our tires. I contacted General Godfrey of the Engineers, and in order to prove to him the seriousness of the situation asked him to fly over to Myitkyina with me. He agreed. It so happened that we proved the point a little better than I had anticipated, for on landing we hit a small boulder, and our own tire blew with a bang. The plane lurched, and we were all shaken up a bit. Without any further prodding, General Godfrey called out more native troops to work on the runway.

For an adequate check on *health and morale,* the flight surgeon saw

each pilot personally before take-off. The pilots' diets had to be supervised. Eating gas-producing foods even hours before take-off would result in debilitating agony at high altitude.

This highly condensed list may give an idea of some of our routine checks and preventatives. When an accident occurred, every conceivable factor was considered and investigated with thoroughness carried to the extreme. We retraced not only the activities of the pilot, but those of the lowest man in the maintenance crew as well—and for a period of two full days before the accident. The men who did the actual maintenance work on the airplane were interviewed exhaustively. We wanted to know exactly what was done to the plane and why. We would interview the supervisor who had made the final inspection of the maintenance work, and check the engineering officer to make sure he had confidence in the ability of his inspectors, and the base commanders on their confidence in their engineering officers. Sometimes we would have a flurry of accidents among planes from one base, and it usually turned out in such a case that an overzealous Operations Officer, trying to get more tonnage, was pushing the maintenance section to the degree that it was turning out sloppy work. As a result of each investigation, I wanted sound recommendations, creative recommendations, beneficial recommendations—recommendations which would correct discrepancies and determine new procedures.

As an example of thoughtful and creative recommendations, let me pass on some from Colonel Earl Hamm, our Service and Supply officer.

"We've got these guys out here ten thousand miles from home," Hamm said one morning, "and just about the only possible chance the GI has of getting just a few little personal luxuries on a regular basis is through the Post Exchange. He's lonely and blue, and if he goes to the PX and finds he can't even get a Hershey bar, he's going to be lonelier and bluer. I think that this is a definite factor in morale, and I'm going to jack up the PX's all through the division."

He did a good job, too. One alert PX officer set up a small mobile branch, stocked with such items as hamburgers, hot coffee, and candy bars, and moved it right out on the line so that crews waiting for take-off could avail themselves of it. Other bases quickly followed the example.

Hamm also took great interest in our transient service. If a candy bar could help a man's morale, then certainly good food and comfortable

quarters for crews laying over would have a greater beneficial effect. This was not just a matter of procuring supplies, but of creative recommendations concerning what we already had. At every base quarters for transients consisted of one big room. There wasn't much we could do about that, but Hamm suggested that at least we could place the men who came in early and had to go out early in one corner of the big room away from those who had come in late and were going out late. As the Hump was an around-the-clock operation, it was quite reasonable for men who flew all night to sleep during the day. Quiet signs were posted around the billeting area, and their message was enforced.

Hamm saw to it, with my encouragement, of course, that meals were available at all hours. That meant dinner at 3 A.M., for men coming in after a long flight, as well as at twelve noon. Facilities were maintained around the clock to supply hot coffee, juice, and sandwiches for in-flight needs, and a short-order bar for crews making quick turn-arounds or short stops.

This program had to be complete. Suppose, during monsoon season, you took in a pilot, fed him excellent meals, gave him a comfortable bed in a quiet corner—and then sent him out on a half-mile hike through the driving rain to get to his plane? And so we bore down hard on the motor pools to ensure that vehicles would be ready to take outgoing crews to their planes and to meet incoming aircraft.

Some accidents were caused by birds. I remember one in which a vulture came right through the windshield in clear weather at five thousand feet; the copilot was killed. But most accidents due to birds occurred at the end of the runway, where, for some reason, large flocks of what we called kites would congregate. We would regularly send out detachments of men armed with shotguns to shoot all the birds they could and scare the rest away, but after a few days they would be back again. This target practice became routine.

Most of our accidents were caused by human error. Soon it became obvious that the young pilots were the most prone to accident. Pilots of any age who had less than five hundred hours of flying time comprised the next class of men you wouldn't choose to fly with, and mature men with sufficient flying time, but inexperienced on the Hump, came next. The safest pilot on the Hump would be a man in his thirties with two thousand hours or more pilot time, including at least two hundred hours

in India or over the Rockpile, and one who averaged more than thirty hours per month.

We couldn't do much about the age of the pilots we were sent, but we certainly could do something about their experience. Men who came to us with little flying experience were assigned to the India Wing, to fly around India exclusively. Most of the routes between points in India were over relatively flat country, and there were places to land in case of trouble. There was also comparatively less weather trouble in India than on the Hump. In the dry season the conditions were just perfect, and even in the monsoon season the mornings were usually clear. We were thus able to build up the newly arrived pilot's flying time under comparatively trouble-free conditions. When he was ready for the Hump, he would make several trips as a copilot before even becoming eligible to try for a first pilot's job.

One particular type of accident occurred nearly always on the China side. Those who observed these accidents reported that the plane would be coming in under seemingly perfect control and excellent weather conditions, make a good approach—and then continue that approach right into the ground, killing everyone on board.

What mysterious, occult reason was behind these inexplicable crashes? We came to the conclusion that it was nothing exotic at all, just the simple lack of oxygen, or anoxia. Our standards today, twenty years later, require pilots to use oxygen in our jets at take-off. Over the Hump we flew at a minimum altitude of seventeen thousand feet, frequently at twenty-five thousand and over. It was imperative that our crews, certainly the pilot, wear an oxygen mask. But sometimes we'd be so unfortunate as to have one of those big, tough fellows, who sneered at oxygen masks, piloting one of our planes. After crossing the Hump, coming down abruptly from a twenty thousand-foot altitude, his vision affected and mind beclouded by anoxia, he'd just fly right on into the ground, cargo and everybody else with him. We tried to prevent this by several methods, including discussions led by flight surgeons on anoxia and its sneaky, killing ways. But it always seemed a little frustrating to have to tell men over twenty-one years old that they needed oxygen.

More and more, as Stiles' statistical program poured out comprehensive data, our picture of the operation was getting clearer and clearer. At the beginning, on the Hump statistical control as Stiles and I knew

it did not exist. All that mattered then was the strength of the command, the number of planes, and the number of trips over the Hump in each twenty-four-hour period. Now we required so much statistical information, all of it important, that we sent statistical officers to each base to make sure that we got it. One bright young second lieutenant reported back that when he first arrived at the base to which he was assigned, the station commander looked at his orders, looked at him, and then said, puzzled, "What's a statistical officer, and what in the hell do you do to keep busy eight hours a day?"

Our hard-working young officers helped put in personnel- and traffic-operating and maintenance-reporting controls which the old Air Corps personnel had never dreamed of, controls which enabled us to get a firm grasp on the business of flying the fliers over the Hump. We were a big business, and to run a big business successfully we had to know what was going on. I wanted to know just exactly what every airplane on every base was doing every minute of the day. How many planes were flying, how many were in maintenance? How many were in loading docks? And if in maintenance, what kind of maintenance—fifty-hour inspection, one hundred-hour inspection, or engine change? What was the crew ratio to aircraft in commission? How many men were D.N.I.F. (duty not including flying)? Such classification was brought on by such maladies as colds, ear infections, or tension; only the doctor could put a man of D.N.I.F. Why a higher rate at one base than another?

On some days, when I first assumed command, less than half of the airplanes on a base were flyable. Why? It could be the fault of poor scheduling, in which Operations might send too many planes in for periodical check on the same day. But more likely the problem would be one of supply. The engine parts needed to make the planes flyable were not available. Sometimes, we found, necessary parts had been stuck away and forgotten. More likely, however, the missing part or parts had never been requisitioned. It is remarkably easy, particularly when morale is low and nobody gives a damn, to fail to requisition a vital part. The supply clerk, with itching beard and sleepy head, might put down the wrong number or the wrong nomenclature of the item needed. The supply sergeant might let the requisition blank sit on his desk for days. Supply officers, some unloaded on the theater in the first place, frequently were lax in keeping their men on the stick, as were engineering

and maintenance officers. The whole maintenance complex included crew chiefs, subline chiefs, and inspectors, each of whom could easily muff his job if he didn't keep alert, if he wasn't proud of doing it right. It went right on up to the base commander.

For some problems I could take immediate action. To expedite important supplies, for example, I kept an officer at the main depot in Miami as my liaison man and trouble shooter. He saw to it that our requisitions were given prompt treatment, and that whatever it was we needed was put on the Fireball Express.

But the best cure for lack of supplies, for improper maintenance, for all the other ailments that caused loss of life, loss of planes, and loss of tonnage, was high morale. As I went from base to base, talking with officers and enlisted men alike in every department, I felt I could see the morale rising. My men were living like American soldiers now; they were shaving, keeping their quarters clean, and marching in parade on Saturdays. They were getting better food to eat, more PX supplies, and less mosquitoes. They were even getting entertainment. Not the big troupes of headline stars flown to other theaters of operation, but home-grown talent, in many cases comprising little better than an amateur hour, but entertainment none the less. Fortunately, in our command, we had one great star, Sergeant Tony Martin, the singer. He was a godsend. I gave Tony his head, and he put together traveling troupes from talented personnel already in the theater but performing other tasks. We sent these troupes all over the command, putting on shows for our lonely, homesick GI's. Another great professional was the youthful but highly talented concert pianist Leonardo Pennario, then eighteen years old. There was some problem in locating a piano, having it tuned to Pennario's demanding ear and then shipping it around the circuit, but Tony managed it.

Once a morale pattern is established and men become sharper, more alert, ideas come along readily. Two obvious shortages in the entire theater were fresh foods and recreation in off-duty hours. Put the two together, however, and they solve themselves—gardens! Within a few months after the suggestion was first made, there was a total of seventy-five acres under cultivation around the various bases. Americans like to do things big, and bulldozers, tractors, and jeeps were pressed into service in clearing large areas. So were native Indians and oxen. I appointed

one of my officers agricultural advisor, and each base was authorized an agricultural officer (in addition to his other duties), and a full-time noncom as working manager. The home-gardening program at Sookerating proudly reported after a few months of operation that its yield totaled 822 pounds of radishes, 700 pounds of cucumbers, 1440 pounds of green beans, and 20 pounds of sweet corn. The corn was just coming in at that time; stalks were nine feet high and still growing.

Many of our men, GI's and officers alike, had been torn from their schooling by the war and preferred digging in books to digging in the good earth. Fortunately, we also had many men on hand who had been professors in civilian life. We were able to set up courses of study at several of the bases. Our five institutions of higher learning, known as Chabua, Assam, Basha, and Bamboo Universities, and Teke Hai College, soon had a combined enrollment of several thousand students.

It may seem paradoxical, but as the extracurricular activities increased, so did the work production. There was no question about it: The aircraft were in a much better maintenance condition now than before. You could see it with the naked eye, both on the shining surface of the planes and on the daily reports from the statisticians.

Frequently, when I'd visit one base, both officers and men would ask me how they were doing in relationship to some other base, or the entire command. When I could say, "This base is leading all the others," they'd look proudly at each other, sometimes even let out a whoop. But when I had to report that Kurmitola, say, or Chabua, was way out in front, they'd grimly assure me that it wouldn't be for long.

If only I could harness this sense of competition, I thought, make it work for the entire operation. I have found over the years that American soldiers and airmen thrive on competition. Of course, in war, the enemy usually provides more than enough, but there on the Hump, although occasionally a Jap plane might cause us a little embarrassment, the overwhelming majority of us never saw a Japanese soldier, rarely even a Japanese plane. The enemy was remote; we did not have the sound of artillery or small-arms fire to keep us reminded of war. Few men could see the results of their work, for the very purpose was to get it to China. Under such conditions it was human to relax occasionally. But if the Japanese would not co-operate with us in offering a little competition, I thought, then it was necessary for us to furnish our own.

We'd get the bases competing against each other. But how? The answer was obvious. We'd publish a daily bulletin listing the full accomplishments of each base in the period just ended. I knew my GI's; they'd do the rest.

It was first necessary to establish a fair quota for each base on both a daily and monthly basis, taking into consideration the handicaps and advantages of each. First we had to consider the number and kinds of airplanes on each base. We operated several different airplanes—C-46, C-47, C-54, C-87, C-109, and at times even B-24's—and each of these planes had different capacities for cargo and different flight characteristics. Some were easy to maintain, some difficult. Some had a backlog of parts available in the depots and on the base, while for others parts had to be flown in from Miami, half a world away.

We also had to consider the distance of the base from its usual China destination. Eventually we had a total of thirteen bases in India and six bases in China working the Hump, and the round-trip distance varied as much as fifteen hundred miles between the nearest and the farthest.

Overall, the daily quota for each base was as fair as we could make it, and was, of course, subject to change as conditions changed. It was like handicapping horse races. With a quota established for each base, I now had to get the news of how each base was doing out to all the other bases. I turned this project over to Gordon Rust, and he did the excellent job I expected of him. The daily bulletin became more than that; it grew into a newspaper. But still the most vital news to each man in the Hump operation was how his base was doing in relationship to the others. This healthy competition was a topic of conversation on every base. Wagers were made, sometimes between whole units, and large sums changed hands. The tonnage figures began to rise, steadily, steadily, hour by hour, day by day, month by month.

I was fully aware, as I increased military discipline, cleanliness and courtesy, and ordered parades and inspections on Saturdays, that I might be jeopardizing any chance of winning a popularity contest. This did not bother me a bit; I was not there to be a good fellow, but to get results. I had already become known as a cold, hard driver, with the nickname "Willie the Whip" whispered behind my back, and I didn't lose any sleep over it. The men on the Hump were just like everybody else. They tended to forget the positive benefits, like better food, living

conditions, entertainment, recreation, and the very fact that they now had a better chance to live in good health and enjoy all the rest; but they remembered the annoyances and groused about them.

I was completely unprepared, therefore, for the letter I received the day after Christmas, 1944, after I had been on the job less than four months. I will reprint it here in its entirety, Army phraseology and all, so that you can imagine the emotions which poured through me as I read it.

Dear General Tunner:

Since Lieutenant Colonel Homer Kellums is returning to headquarters today and has kindly offered to carry a personal message to you, I'm taking this opportunity to send a copy of Misamari's broken records as of the 24th of December, 1944. I trust you will find the records interesting. The idea of trying to break our own record on trips over the Hump as a Christmas present to you came about three o'clock on the afternoon of the 23rd. It was briefly discussed and the decision to make the effort was made. I wish you could have been here to witness the result. There was no pressure; no forcing of men to do the job. Every effort was voluntary, like spontaneous combustion followed by wildly sweeping prairie fires. Enthusiasm concerning the project burst forth in every section of the field. A goal of 55 trips was set and the numerals painted on a banner. That the numerals would have to be changed to higher ones four times during the 24-hour period none of us even dreamed. Colonel Kellums, who knew nothing of the effort until six P.M. at the supper table, early the following morning set the score when, after keeping constant tally on each and every trip, both in and out until 4 A.M., prophesied that 81 trips would be the total reached. The 81st trip left the runway one minute before the deadline.

Since the records speak for themselves, General, there is no reason for me to write a lengthy explanation of how the feat was accomplished. But I do wish to say, sir, that because of your stated appreciation of the work done at this field and because of our affection and regard for you, we did it as a Christmas present for our commanding general. We hope it is only a forerunner of accomplishments to be attained in the future.

My sincerest personal regards,

James A. Dearbein,
Major

The letter was a bolt from the blue. It indicated what I had always believed, that if the boss did the best he could for his men, that if he convinced each individual of his own importance to the over-all mission, that if he had confidence in his men and they had confidence in him, then together they could accomplish miracles.

And here was the proof. Eighty-one trips in one twenty-four-hour period, although the normal number was thirty for that base. I thought of the tired pilots going out again over the Hump at night, of all the other officers and men working long and hard to give me this Christmas present, and I don't mind admitting that Willie the Whip's eyes were smarting a little.

About this time General Smith made a one-month inspection of the division; this was the occasion of his good-natured beef about saluting his arm off. At the completion of the inspection, on January 28, 1945, he wired General George as follows:

AM LEAVING THE INDIA CHINA DIVISION WITH THE ASSURANCE AND BELIEF THAT THE OPERATIONS OF THIS DIVISION WILL GO FORWARD ON A BASIS WHICH WILL REFLECT CREDIT ON THE ATC AND THE ARMY AIR FORCES. IMPROVEMENT DURING THE PAST YEAR HAS BEEN SUBSTANTIAL AND IS CONTINUING. MEASURES HAVE BEEN, ARE BEING AND WILL BE TAKEN WHICH WILL CONTRIBUTE TO INCREASED SAFETY OF OPERATION AND AT THE SAME TIME PERMIT THE ACCOMPLISHMENT OF THE MISSION OF THE DIVISION. I HAVE MET WITH THEATER COMMANDERS, AND AIR FORCE COMMANDERS IN BOTH INDIA AND CHINA AND I AM ASSURED THAT THE ORGANIZATION OF AIR TRANSPORT COMMAND IN BOTH INDIA AND CHINA HAS THEIR RESPECT, GRATITUDE AND COOPERATION. IN NO SECTION OF OUR WORLD WIDE OPERATION THAT I HAVE VISITED IS THE RELATIONSHIP BETWEEN THE ATC AND THE LOCAL ORGANIZATIONS SERVED ON A BETTER BASIS. THE COMMANDING GENERAL ICD, HIS STAFF AND ALL MEMBERS OF HIS ORGANIZATION SHOULD HAVE YOUR COMMENDATION FOR THEIR GOOD WORK AND ACCOMPLISHMENTS ON BEHALF OF YOUR ORGANIZATION AND OF ARMY AIR FORCES.

In my first few months on the Hump my emphasis on morale and safety unquestionably affected the total tonnage. In August, 1944, the month I took over, we airlifted over twenty-three thousand tons to China,

but to Tom Hardin, my predecessor, however, must go much of the credit for this tonnage. In September, my first full month of operation, the tonnage went down to 22,000, but there was a good reason for this reduction. I had promised a fair rotation policy, and I stuck by it. Some men, technicians performing vital jobs for whom no replacements were readily available, had been kept on in the division long after their time had run out. I sent those people home, replacements or no replacements, and there's no question but that this slowed our operations to some degree.

Another factor in the decrease was the weather, or, rather, my reaction to it. By this time I had become convinced weather on the Hump was a major accident factor. There *was* weather on the Hump, and we had to face the fact. I knew that our mission was to fly tonnage to China to prosecute the war as vigorously as possible and that therefore we had to fly under tough conditions. We did so; no airline today would permit flight under the conditions we worked under—poor communications, practically no radio beacons, planes loaded to the maximum, usually bad weather over one end of the route or the other and sometimes both, icing, extremely high mountains with little chance of clearance if an engine conked out, and, of course, the inhospitable terrain below, with its sprinkling of hostile tribes and Japanese. I knew that I had to send men out to fly under these conditions, and that frequently I would have to fly the route myself. But I did not believe that it was my duty to send men out into conditions known to be far more dangerous than usual. Thus, when a pilot flew into a particularly severe storm, found his plane being buffeted around and icing up to the extent that he just might not make it, that man had my orders to turn around and come back. Further, we'd hold up all flights for a while in hopes the storm would abate. It is true that some flights, many flights, were delayed by this policy. But fewer pilots flew themselves and their planes into mountains.

In October we more than made up for the September slump, with a tonnage of twenty-five thousand. November represented by far the greatest increase on the Hump since its inception, with thirty-five thousand. December dropped some three thousand tons, but January showed another striking increase. And so it went.

Although we were making substantial gains in holding down the rate of accidents, the over-all number of accidents increased as the number

of flights increased. As I mentioned before, in January, 1944, the Hump operation had shown a rate of two accidents per one thousand flying hours. In January, 1945, the rate was .301, an improvement of 700 per cent. Yet that month we had twenty-three major accidents, in February thirty-eight, in March forty-six. We lost a total of 134 crew members in the first three months of '45.

Again pressure poured in from General George. I was told that, while the improvement in the accident *rate* was most commendable, there must be a substantial reduction in *number* of accidents per week and per month no matter how much tonnage was transported, no matter how many hours were flown.

On the other side of the Hump, Lieutenant General Albert C. Wedemeyer, Theater Commander in China, who saw little of the accidents but felt the increasing intensity of the Japanese effort to break into western China, cried out for more and more tonnage. Lieutenant General George E. Stratemeyer, commander of the Allied Air Forces in India and Burma, had been informed that as soon as monthly tonnage on the Hump increased to the point that it could support the extra men and planes in China, he was to move to China with his staff and the Tenth Air Force (then based in India) to command both the Tenth Air Force and the Fourteenth Air Force and to increase pressure on the Japanese army and their coastal shipping. He was naturally eager for Hump tonnage to increase in order to carry out this mission. He sent a wire to General George, with a copy to me, saying, in part:

> I AM THOROUGHLY SYMPATHETIC WITH YOUR DESIRE TO ACHIEVE THE FINEST SAFETY RECORD POSSIBLE ON YOUR HUMP OPERATION. HOWEVER I FEEL THAT YOU HAVE GIVEN FLYING SAFETY FIRST PRIORITY OVER TONNAGE PRODUCTION. PARTICULARLY RESTRICTIVE HAS BEEN YOUR INSISTENCE THAT THE NUMBER OF ACCIDENTS BE REDUCED EVEN AT THE EXPENSE OF ESSENTIAL TONNAGE.
>
> I RECOMMEND THAT YOU REMOVE THE STRESS ON THE NUMBER OF ACCIDENTS USING INSTEAD AS A MEASURING STICK ACCIDENTS PER THOUSAND HOURS ON A TON MILE OR FLYING HOUR OR A COMBAT BASIS.
>
> SECURE FROM THE STATES MORE EXPERIENCED CREWS.
>
> PERMIT AN INCREASE IN TAKE OFF WEIGHT (INCREASE THE LOAD) IN C-54 AIRCRAFT.

Later, Stratemeyer again wrote to General George:

AS YOU WELL KNOW YOUR HUMP OPERATION IN THIS THEATER IS THE LIFELINE TO CHINA AND IS THE MEDIA BY WHICH AN ENTIRE U.S. THEATER IS SUPPORTED. I UNDERSTAND THAT HUMP ROUTE CONSTITUTES A SUBSTANTIAL PERCENTAGE OF YOUR FOREIGN AIR TRAFFIC. I AM CONVINCED THAT IN YEARS TO COME YOUR COMMAND WILL RECEIVE AN EXALTED PLACE IN THE HISTORY OF THIS WAR. THE HUMP IS THE MOST EXACTING AND DIFFICULT AIR ROUTE IN THE WORLD. THE AVERAGE PILOT WILL ADMIT THAT HE WOULD RATHER FLY COMBAT MISSIONS DEEP INTO JAPANESE TERRITORY THAN FLY A HEAVILY LOADED TRANSPORT AIRPLANE OVER THE HUMP. WE HERE HAVE ALWAYS CONSIDERED THE HUMP OPERATION A COMBAT JOB. IT IS URGENTLY RECOMMENDED THAT YOU VIEW YOUR HUMP OPERATION AS SEPARATE AND DISTINCT FROM OTHER FOREIGN AIRLINE ACTIVITIES. TUNNER HAS CUT ONE MONTH'S FORECAST FROM 48,000 TONS TO 42,000 TONS BECAUSE OF ACCIDENT PREVENTION PRESSURES. THIS FORECAST REDUCTION IS VIEWED SERIOUSLY. I SINCERELY BELIEVE THAT THIS TONNAGE REDUCTION IS DUE TO YOUR EXTREME ACCIDENT PREVENTION POLICY. ACTUALLY TODAY THE RATE IS ONE ACCIDENT PER 2000 HUMP FLYING HOURS WHICH IS SURELY LOW IN COMPARISON WITH COMBAT OPERATIONS OF HEAVILY LOADED BOMBERS. GENERAL IRA EAKER IS WITH ME AND HE AGREES THAT THIS OPERATION CANNOT BE COMPARED WITH ANY OTHER AIRLINE OPERATION IN THE WORLD AND SUGGESTS THAT YOU GIVE MORE LATITUDE. TUNNER THEN WILL HAVE MORE LATITUDE IN CONDUCTING HIS HUMP OPERATION TO THE END THAT GREATER THEATER TONNAGE CAN BE DELIVERED. IF YOU ARE SHORT OF PILOTS EAKER AND I BELIEVE THAT MANY SEASONED BOMBER PILOTS FROM EUROPE WOULD BE GLAD TO GET THE CHANCE TO FLY TRANSPORTS WITH AN EYE TOWARD COMMERCIAL FUTURE.

I would have been most willing to have bomber pilots, or any pilots, as the command was acutely short of experienced fliers. But I could not go along with the argument that the entire accident policy should be modified to permit the accident rate to conform with the combat rate. We were flying in January three times as much as in the previous January, and our rates were materially better. I was by no means convinced that relaxing safety procedures and pilot standards would mean an in-

crease in Hump tonnage in the first place. Every plane and every crew which flew the Hump and returned safely meant that the same ship and the same crew could carry another load to China, and another and another and another. With steady improvement in every phase of the Hump's operation, I knew that we would soon satisfy both General George's demands for a rock-bottom accident rate and the theater demands for constantly increasing tonnage over the Hump. And this we did do. The tonnage went up, the accidents went down. The last big month, July of 1945, showed a total tonnage of 71,042, with our lowest accident rate on record—.239 per thousand hours of flying.

Another bitter controversy involved Major General Claire L. Chennault, commander of the United States Fourteenth Air Force in China. My running battle with General Chennault was certainly not of my own choosing, for I had admired and respected him for years. I first encountered him as a student flier at Brooks Field in San Antonio. It was Major Chennault who determined whether we students would go on to the advance flying school at Kelly Field—or go back to the infantry. He had a reputation of being mighty tough, and we all dreaded the check flight with him. In my case, I had the usual trepidation, but once the flight had actually begun I found it both pleasant and rewarding. Chennault was a great pilot; he knew how planes should be flown. He spared no words if there was a mistake, but he was firm and fair.

There was no question but that General Chennault served nobly and valiantly during the war, particularly in the early, most critical years. He and his Flying Tigers, always outnumbered, still managed to delay and severely punish the advancing Japanese forces. He earned the close friendship of both the Generalissimo and Madame Chiang.

Our argument grew out of the operations of the Air Transport Command and its India-China Division within China. General Chennault did not want the ATC to operate in his command other than to airlift supplies into China, unload, then turn around and go home. He wanted to handle all military air movement in his command, with his troop carriers serving as logistic airplanes. I felt that air transport in China was a job for the India-China Division of the Air Transport Command. It was not, despite accusations made to that effect, a question of ambition and empire-building, but of common sense in air transportation. We never lost track of the fact that the primary mission of my division was to fly critically needed supplies and people across the Hump into China. But

the ICD had picked up other jobs too over the years. We now ran a regularly scheduled airline connecting all the American military bases within India. We were charged with the duty of returning sick and wounded American soldiers to the base hospitals in India, or to Karachi for evacuation to the United States. To our mission of airlifting supplies to China had also been added the job of bringing back on our return flights such strategic war materials as tin and antimony, which were in short supply in the United States, as well as, believe it or not, pig bristles and duck feathers.

Of all our extracurricular duties, the most important was our operation of an airline within China. Simply dumping the cargo at the Chinese bases was, I felt, doing only half the job, for everything still had to be redistributed to the using agencies. Some supplies went to the Liuchow-Kweilin area, five hundred miles east of Kunming, some went as far as Sian on the Yellow River, eight hundred miles to the north of Kunming. All this had to be moved by air; vehicular traffic was out of the question. Chinese roads outside of cities and towns were about in the same condition as American roads at the turn of the century. As for Chinese vehicles, they were in terrible shape. They were held together with baling wire. For fuel they used alcohol made from rice, and rice was scarce. That these trucks operated at all was a mystery to Americans. I remember seeing GI's with their chins down on their chests in amazement as they watched a typical Chinese truck repair job. There would be the truck at the side of the road with three or four Chinese calmly grinding valves or making whatever other repairs might be necessary, while their rice cooked over a charcoal fire and their straw mats awaited them under the truck. They might work there on the roadside for days. They usually got the truck going again, but this sort of thing hardly made for an efficient transportation system.

Thus the redistribution of supplies from the bases was a job for air transport, and specifically, in my book, for the Air Transport Command. It so happened that we were doing most of it anyway, but spasmodically, without direct control, and at a tremendous cost to Hump tonnage. For frequently aircraft which had flown the Hump and set down at bases in China would be requisitioned by authority of Wedemeyer or Chennault, without previous warning, and the crews ordered to fly them on to whatever emergency might exist farther forward. Sometimes these planes would continue on with the same cargo, sometimes they would be un-

loaded and different cargo placed on board. They might go to the east or north. But whatever they carried and wherever they went, both planes and crews would be completely out from under the authority of their home base. This raised absolute hell with scheduling.

Our operating policy was that each plane must be flying, be undergoing maintenance, or be in the process of loading or unloading every second of every day. Any condition other than those three had to be answerable by the base commander. Charts and graphs were kept at each base to show the status of every plane, every hour. We did not fly schedules on the Hump; rather, each plane proceeded automatically and immediately from each function to the next. When its time came for maintenance, it went to the shop, and when it was ready for flight, it was loaded and then took off. That went on day and night. This is how you build up tonnage, by the constant utilization of equipment.

Crews, also, must be utilized efficiently, but with a difference. Crews must rest. If they do not get adequate rest at the proper intervals, they have accidents.

It was the job of our Operations officers at our bases in India and China to schedule both airplanes and crews in an efficient manner in order to get the maximum from each. We were constantly hammering at them in an effort to achieve the very optimum of utilization of equipment, dovetailing the requirements of the metal monsters with those of the flesh-and-blood crews who flew them. This was the sole function of skilled technicians. And so, when our planes were requisitioned by General Chennault in order to make local deliveries in China, the whole schedule went to pieces. A plane due for one hundred-hour inspection might wind up at some outlandish place in China, where there was neither inspector, mechanic, nor equipment. Planes went out of commission at out-of-the-way fields where there were neither spare parts nor mechanics. Maintenance men then had to be flown in from bases hundreds of miles away, completely disrupting the work of the base from which they came. The crew, in the meantime, would be sitting around doing nothing, unless a plane was dispatched to pick them up.

On the other hand it might happen that the crews' normal flight time would terminate at one of these advance bases, and as a result the men would rest or sleep while the plane simply sat there, doing nothing and having nothing done to it. There is nothing more frustrating in air

transport than to know a plane is idle, and to be unable to do anything about it.

We in air transport knew very well that these supplies had to be forwarded from our own bases in China to the ultimate user. We were more than willing to do the job, but it had to be done our way—efficiently. With people stepping in and grabbing our crews and planes regardless of schedule, not only was the local delivery job being done inefficiently, but it was disrupting the entire Hump operation.

And that, after all, was our primary mission. We were in an hour-by-hour, day-by-day fight for time. When fifty aircraft at one time were immobilized, with their crews asleep in China and maintenance men and parts a thousand miles away in India, there was a corresponding decrease in the Hump tonnage. The commitments made to Chiang Kai-shek by President Roosevelt, General Arnold, and General George could not be made under such conditions, and of course the blame for it came right back on me. I was not answerable to the people who took my planes away, but to Washington. And Washington wanted that tonnage.

The answer to the problem was perfectly simple. The situation merely called for the establishment and operation in China of a fleet of C-46's and C-47's with crews to fly them, with maintenance men and supplies to keep them in shape, and with operations officers to schedule the entire job efficiently. When it was necessary to move cargo around in China, these aircraft would be available for the job. If it happened that there was not enough work for all of them to do in China at any particular time, the extras would be assigned to fly back across the Hump, pick up a load, and return, just as the India-based planes were doing. In this way, the day-by-day rhythm of the Hump would not be disturbed, and we could meet our commitments. Indeed, this plan was the only one which made any sense at all.

But when I proposed it, General Chennault screamed bloody murder. You would have thought I was reaching into his command and taking his planes away from him, instead of merely operating my own. He agreed that there was a need for more air transportation in China proper, but he maintained that if it were available, it should belong to him. He gave many reasons for his position. He contended that the Air Transport Command could not operate as efficiently as he could in China, that the ATC needed more personnel to do the same job that he could do with

less, that our accident rates were higher, and that the daily utilization of ATC aircraft was less than that of his own. He put this in black and white in communications both to General Wedemeyer and General Stratemeyer.

I doubt seriously if the Fourteenth Air Force had a statistical officer at all; I not only had one, but his name was Kenneth Stiles. Thanks to his superior statistical program, I could prove my figures. The utilization per month for ATC aircraft in China was 212 hours, as opposed to the 148 for the troop carriers which the Fourteenth operated. The washout rate of ICD aircraft was less than one half of the Fourteenth's troop carrier rate. Further, we were operating with one half of our authorized strength in China and consequently were in no way out of proportion in personnel strength. Tactical units were not then nor are they today the ones who should handle air transport. The mission needed the full-time thinking of a commander and a good staff of specialists. It could not safely be an add-on mission to tactical air.

The Japanese helped bring the matter to a head. They launched their long-expected push to Kweilin and Liuchow in mid-autumn, captured both places quickly, and then started on the road to Kunming. This was the Chinese terminus of the Hump, and the nerve center of the bulk of American activities in China. Staffs in both India and China were in an understandable dither. The tactical situation was critical and dangerous.

In a conference called by General Wedemeyer and attended by both General Chennault and me, the theater commander asked us both point-blank for an all-out performance. My job was to get supplies over the Hump; Chennault's was to fly the maximum of fighter and bomber sorties. Chennault replied that he would fly as many missions as his supply would allow, but that this number was wholly dependent upon the amount of Hump tonnage allocated to the Fourteenth Air Force.

Wedemeyer's next comments made us all sit up and take notice. Chiang Kai-shek had made the decision to move two Chinese divisions from training areas in upper Burma to reinforce the defense of the vital Kunming area. In addition, the joint American-Chinese staff recommended the movement of thirty thousand more troops into the area from Sian, far to the north. Wedemeyer said that he concurred fully with both troop movements.

"And gentlemen," he added quietly, "these movements will have to take place by air."

Normally, of course, it would be the job of the Fourteenth Air Force to move these troops with its own troop carriers. Chennault pointed out, however, that if his primary mission was to fly bombing and fighting sorties, he would need every one of his transports for his own logistics support. The fat was in the fire. If Chennault could spare no transport planes to move the Chinese troops, then he would have to agree to permit ATC transports to carry out the troop movements. These transports would have to be based in China. We, the ATC, would both move the troops and support them, as well as the American advisory groups assigned to the Chinese forces.

Wedemeyer drove home the importance of this job. At the time, Allied Forces under Admiral Mountbatten were pushing into Japanese-occupied Burma. The success of this operation, Wedemeyer pointed out grimly, would be completely nullified by the fall of Kunming and its loss as a terminal of supply. If we lost Kunming, he went on, the Chinese Central Government would collapse.

"My directive, gentlemen," he concluded, "requires that I conduct, with Chinese and American forces, the maximum effective operations against the enemy in order to contain and divert the enemy in the Chinese area and so render support to the war in the Pacific."

These were strong and important words, and I went away from the conference determined more than ever to carry out the mission of the India-China Division, with, I hoped, the co-operation and friendship of General Chennault. I sent fifty C-47's and twenty C-46's into China to carry out the troop movement, according to the plan approved by all concerned.

But the rivalry continued. It seemed that I could do nothing to placate him, that everything I did was wrong.

One day, during the Japanese push on Kweilin, I flew over to China on a double mission, to confer with General Chennault at Kunming, and with Casey Vincent, commander of the field at Kweilin. I was in the new four-engine plane, the C-54, the first one in the theater, and I wanted both Chennault and Vincent to see it. I also brought along a dozen cases of beer for Vincent and his men, who were having a pretty rough time of it. We radioed the tower at Kunming as we approached, but got no answer, as frequently happened, and so I went on to Kweilin. Vincent had already evacuated a good portion of his men, and the rest of them were living in caves in the hill adjoining the field. When I first

stepped out of the plane, a couple of explosions came from the hill and clouds of dust went up, and I nearly turned around and got right back in. Vincent, however, came up with a handshake and a grin, and explained that they were dynamiting the caves they'd been living in to keep the Japs from using them.

"We've got men out mining the field, too," Vincent said, pointing them out. "There's not much we can do to stop them from coming, but we can make sure they don't find much when they get here."

It was hot work, and the men had no objections at all to dropping what they were doing for a moment and having a bottle of beer. I showed Vincent through the new plane, and it was such a beauty, so much what we needed on the Hump, that I'm sure we all forgot about the Japanese completely while we were admiring it. I stayed around an hour or so, then left Vincent to the job of destroying the field and the caves. By the time the Japanese advance patrols did come in the next day, the Americans had finished the job and departed.

On the way back I called the tower at Kunming, and this time I was acknowledged. We came down to see General Chennault. We landed, taxied up to the Operations Building, and there he stood, waiting for me. He started chewing me out before I got a foot on the ground.

"What in the hell do you think you're doing, Tunner?" he said. "Flying all over China in that thing—don't you know my men have never seen anything like it before? They might have shot you down, and it would have served you damn' well right. What right have you got flying over this territory anyway?"

I tried to tell him that we had attempted to call the tower, but I couldn't get a word in edgewise. He began belaboring the plane. "What the hell do you need with a four-engined monstrosity like that, anyway? Damn' thing must drink up gasoline. We'll probably have to give you a thousand gallons to get you back where you belong."

Then I did get in a word. "No, sir," I said quickly, "I don't need any gas. As a matter of fact, I intend to have eight hundred gallons drained out for you right now. That's why I stopped in. Then I'll take off and leave."

That made him even madder, and he turned his back on me and stomped off. I had the gasoline drained out for him, and went on back to India. My good-will mission had flopped.

During that emergency period my division continued to operate

seventy planes in China. We performed only minor maintenance on that side of the Hump, flying the planes back to India for major work and inspections. Every plane, on its return to China, took back a full load of Hump cargo. Things went smoothly. We performed our primary mission in China, carrying troops to the defense of the Kunming area, and we were also able to divert a plane now and then to the Hump. Thanks to Chennault's excellent combat operations, and to the stubborn defense of the reinforced ground troops, the Japanese offensive was halted.

I dreaded returning to the old system and decided to make one more attempt to get Chennault to see things my way. I prepared a telegram for his signature in advance, addressed to the Pentagon and authorizing the ATC to continue basing fifty C-47's in China. I didn't think I had much chance of getting him to sign it, but I had to do something. I landed at the field and went to Chennault's office. There I was told that the General was not feeling well, and had gone to the doctor's office for a rubdown. I followed him there, and found him on the table. His face was drawn, and his eyes had lost their sharp, alert sparkle. I was instantly sorry I had come. This man was sick.

He looked up at me. "Well?" he grunted.

"I'm sorry, General," I said quickly, "please pardon the intrusion. I didn't know you were ill."

"Well, you're here, and you probably wanted something," he said. "Get it off your chest. You can talk in front of the doctor here. As a matter of fact, he'll witness any decision we reach."

I made as quick and as clear a pitch as I could for his approval of my continuing the operation of the China-based planes, as he lay there on the table with his eyes closed and the doctor soothingly rubbing his back. When I had finished, he grumbled "O.K.," without opening his eyes. I produced the telegram and a pen and held it steady for him as he scrawled his name across it. I apologized once more, thanked him, and left.

This fleet was later augmented by direct order of General Wedemeyer, authorizing the continuance of the twenty C-46's in China. We thus continued the smooth operation of seventy planes, without fear of hijacking. But some months later Chennault apparently noticed my planes flying around and summoned me to his headquarters. I flew over and explained the entire situation.

"I'm sorry if I took advantage of you, sir," I said. "I really did try to leave when I saw you were sick. But we are running a smooth operation with those planes, General. We're getting excellent results."

"Oh, all right," he said, and that was the end of it.

I had won a small victory, but I was not too happy about it. General Chennault was a man with a great fighting heart and a magnificent string of accomplishments over adversity to his credit. He was an elder statesman, a proven authority on military aviation, and compared with him I was only a new boy with some specialized knowledge of flying supplies around. But I did know what I was doing in air transport, and I knew that his staff was not transport-oriented. I knew that I was right.

Many years later I attended a ceremony in Washington honoring General Chennault and his lovely Chinese wife. He saw me and motioned me to him. He was gaunt from the lung cancer which was soon to kill him, but his handshake was strong.

"Bill," he said in his thin raspy voice, "I've always wanted to tell you that if it hadn't been for you and your convictions and your fine ATC organization, we wouldn't have won the war in China."

That fine and gracious compliment coming from the great old warrior made everything all right.

While General Chennault and I had been carrying on our feud, the planes and crews had been carrying on their missions splendidly under extremely difficult conditions. We hauled many types of cargo around Asia, but I can assure you that our greatest headache, even greater than hauling steam rollers, was in the transportation of Chinese soldiers. I found the Chinese to be happy-go-lucky people with a great sense of humor, far different from the more stolid Indians. But there were times when our pilots must have wished they had more phlegmatic passengers.

Just one Chinese, on the ground, could cause a lot of trouble. One type of accident was repeated over and over. It seems that the Chinese coolies believe that an evil dragon is following close behind them at all times. Apparently they manage to stay just one step ahead. They constantly seek to escape the dragon; that's why Chinese footbridges often have crooks in them. The Chinese darts around the corner, and the dragon falls in the drink. To the coolies working about our installations in China, the airplane furnished an even better means of getting rid of the dragons. All the coolie had to do was run in front of a moving

airplane. The closer he came to the whirling propellers, the surer he was that the dragon following him would be chopped to pieces.

Whenever a coolie would make his dash, all the others would set up a cheer, and the narrower the margin, the louder the cheers. Frequently a dragon-fleeing coolie would cut it too close and run into the propeller blades himself. It would make an ungodly mess, with pieces of Chinese flying everywhere, but it never failed to break up the audience. They'd roar with laughter and pound each other on the back. What a happy joke.

It was no joke to those who had to clean up the mess. Nor was it a joke to a base commander who, seeking a perfect accident record in hopes of keeping me off his neck, suddenly found himself having to report the death of one or more Chinese whose timing was just a little bit off. It got to the point that I actually wrote a six-paragraph letter to General George requesting permission to classify these dragon deaths as something other than accidents so we wouldn't be constantly having to report them.

Another source of bright amusement to the fun-loving Chinese was to see a fifty-five-gallon drum containing gasoline which had been hauled halfway around the world burst open when unloaded. We had a standard method of unloading these drums. One or more big truck tires would be placed on the ground beneath the door, and the drums would be rolled out so that they'd fall on the tires. Occasionally a drum would break open even when it landed on the tire, and this we could not help. But it was not funny to us when the Chinese unloading gang would deliberately push the tire away just to see the drums pop open.

Though the individual Chinese are usually thin from malnutrition and hardly impressive as physical specimens, there are so many of them that they accomplish wonders by sheer numbers. I remember well flying over an airfield being constructed in a big bend of the Yangtze, and remarking each trip on how the construction was coming along. The field seemed to grow beneath my eyes. And yet that field was built entirely by Chinese using little hammers to break large rocks into gravel, then carrying the gravel to the runway in little baskets. The baskets didn't hold much, but they didn't have to, for there were over one hundred thousand Chinese men, women, and children carrying them.

We provided the transportation for many different Chinese troop

movements. Even before the big resistance at Kunming, the Hump operation was transporting Chinese troops. We hauled forty on a C-47, sixty on a C-46, eighty on a C-54. To begin with, we carried raw recruits from China to India for training, and they were anything but volunteers. The Chinese federal army recruited its troops in a most efficient fashion. Troops expert at that sort of thing would suddenly descend upon a neighborhood, cordon off a few blocks, then work into the center like beaters on a tiger hunt. Once the new recruits were rounded up, they'd be given a physical examination to determine if they were eligible for service. This examination consisted solely of their dropping their pants. If they were old enough to have pubic hair, they were in the Chinese army.

One morning I was watching a C-46 take off from the field at Changyi with a brand-new load of recruits. Something happened right after take-off, and the pilot had to put the plane down quickly in a rice paddy at the end of the runway. The plane opened up like a rose, and sixty Chinese swarmed out and took off in every direction. I doubt if they've been found yet.

Another plane seemed to be shedding Chinese as it roared down the runway. At the end of the runway the pilot took off and gained some altitude. Suddenly, the plane flew straight up in the air, then flipped over on its back and crashed, killing everyone on board. It was obvious what had happened. The Chinese had gone into a panic. Several had jumped out to their death as the plane picked up speed. The rest all dashed to the rear of the plane just after it became airborne, over-weighting the tail.

An occasional troop-carrying plane would arrive at its destination with one or two men short. Asked about it, the happy-go-lucky fellows would burst into peals of laughter, slapping their thighs and rubbing their eyes at the memory. They considered it a big joke to open up the cargo door, entice somebody to it, point to something interesting below, and then push him out.

There was frequently great turbulence along the route, and there was no question but that it shook up the passengers. One planeload of Chinese troops apparently concluded that the pilot and copilot had given them a rough ride on purpose. As the crew stepped out of the plane, they were surrounded by a group of angry soldiers, shouting and gesticulating. Two of the soldiers, with bayonets affixed to their rifles, backed

the pilot and copilot up against the plane. They were about to kill them when an English-speaking Chinese officer saw the crowd and heard the cries and ran up to investigate. Even then it took some explaining on his part before the angry soldiers put up their bayonets.

From then on it was routine procedure to take all weapons and lock them in the belly compartment of the plane before loading Chinese troops.

One of the most unpleasant runs was that from Sian down to Kunming. Sian was a quiet sector on the Japanese front. It was an excellent recruiting area, with one large city and many towns, and the Generalissimo's recruiters worked it over regularly. They'd march their haul into our airplanes. Pilots on that run soon learned that the way to stay alive was to lock the door between the cockpit and compartment, and keep it closed. It was a five-hour flight, rambunctious all the way. One group got particularly obstreperous, pounding on the compartment door and shouting at the tops of their voices. The last thing in the world that pilot was going to do was open up, but he became fearful that the passengers would batter the door down. The solution to the problem was an easy one. He and the crew simply slipped on their oxygen masks and went on up, higher and higher, until the passengers peaceably went to sleep from lack of oxygen. When he brought them down and the doors were opened up, they were all still suffering from anoxia and debarked like sleepy little lambs.

It gets icy cold at the altitudes at which we had to fly, and in all fairness to the Chinese they must have been pretty uncomfortable. We occasionally got reports of our passengers building a fire in the middle of the plane.

To some of our crews the stench was worse than the danger. One planeload of Chinese recruits could stink up a plane to the point that you'd gag a hundred feet downwind from it. The troops weren't shining clean to begin with, and our planes did not contain powder rooms. They urinated and defecated where they chose, but the worst of it was the vomit. The inside of a plane after eighty Chinese soldiers had spewed half-digested rice all over it and each other for five hours produces a smell you don't even want to try to imagine.

We finally worked out a loading system which took care of everything, more or less. First, of course, we disarmed the incoming passengers. We had interpreters explain to them that they should file on board, sit down

on the floor, and hang on tight to the tie-down rings for take-off. They were asked please to remember that if the plane bounced around and they got cold it was not the pilot's fault. Just remain seated, and don't build a fire. An empty gasoline drum was placed on board for sanitation. After we worked out all the problems of transporting Chinese soldiers, we had no more trouble and moved tens of thousands. But we never did whip the stink.

Though our Chinese passengers were something of a headache, they nevertheless made our work easier in the end. For it was this preponderance of man power, with American leadership and American materiel, which pushed the Japs steadily southward in Burma, past Myitkyina, past Bhamo, past Lashio, past Mandalay. Now we could fly more and more to the south with less danger of Japanese patrols on the ground or interceptors in the air. And as the mountains were not as high in South Burma, we could now get the full usage out of our big four-motored Douglas C-54's, which had a limited ceiling but which could carry a payload of six tons. In addition to its greater size, the C-54 was faster than the C-46, and these two factors gave it twice the effectiveness of Ol' Dumbo, even without taking into consideration the greater dependability and comparatively easier maintenance. As more and more of the big Douglas planes became available, I intended to replace all the C-46's. The bases far up the Brahmaputra in Upper Assam would eventually be closed down. My future plans called for a fleet of C-54's, and nothing but C-54's, operating out of bases in Bengal, on the navigable Ganges. In the meantime, Wing Commander Andy Cannon was making good use of those bases, sending his big planes due east across Burma, then north to Kunming at a maximum altitude of ten thousand feet going over, twelve thousand feet on the return trip.

With the reliable C-54's droning incessantly through the Asian sky, we were able to steadily increase tonnage until in the last big month we delivered seventy-two thousand tons to China—six times the amount which had won a presidential citation in December, 1943. It made no difference to us what we were asked to deliver; we loaded it, flew it over, and unloaded it on the other end. We hauled howitzers. We hauled six-by-sixes, those huge Army trucks with three rear wheels on each side. We hauled road rollers. These huge pieces of equipment really presented no great problem. The army supply people simply cut them in pieces with an acetylene torch and reassembled them at their destination.

It is perhaps only in such dramatic items as these that the person not concerned with military logistics can appreciate the job on the Hump. Who can imagine 550,000 tons, the amount of cargo flown over the Hump in the last year of operation?

Here, in a strange land far from home, on the fringes of a mysterious backward civilization, were all the conditions that bring hazardous flight: fog, heavy rain, thunderstorms, dust storms, high mountains, a necessity for oxygen, heavy loads, sluggish planes, faulty or no radio aid, hostile natives, jungles, and one-way airfields set in mountainous terrain at high altitude.

It's easy to think of the Hump as just one route; actually, of course, it was many air routes, separated both laterally and vertically, from thirteen bases in India to six in China. At first we had a narrow corridor of only fifty miles to accommodate two-way traffic, but the real restriction was in the vertical clearance of eighteen thousand feet to twenty-five thousand feet. On toward the end we had a corridor two hundred miles wide with a maximum vertical clearance in the south of from ten thousand to twenty-five thousand feet. Through this corridor, every day, were flying an average of 650 planes, one taking off every two and a quarter minutes of the day's twenty-four hours. Nowhere were air routes more congested. Pilots had little leeway. They were required to fly at assigned altitudes and speeds. Yet, with elaborate traffic control systems and hundreds of men operating them, the location of all aircraft was known as well as could be expected.

This was all new. No other air operation, civilian or military, had ever before even attempted to keep its fleet in continuous operation all around the clock, in all seasons, and in all weathers. No other operation had such extremes of weather and altitudes. And our cargo was varied, to say the least—from V-mail to mules to machinery. The age of air transportation was born right there on the Hump.

The vast superiority of air transport over surface transport under such conditions and over such terrain was underscored every day. For three years of the war there was no means of surface transportation between the Allies and China. Then the Japanese were driven out of Burma and the Burma Road again put into operation. Fantastic sums were spent on it. As many as twenty engineer battalions were working on it one time. We on the Hump generally had the use of no more than two engineer battalions to build and maintain our bases. In China bases were

entirely coolie-built, with only one strip, and with no binding material but the good earth.

But despite all this effort and expense, the maximum amount of supply carried over the Burma Road at its very peak of operation amounted to just six thousand net tons a month. Many of our thirteen bases in India were topping that figure, constantly and without fail. The operation was not carried on in anonymity. President Roosevelt called our efforts "an amazing performance" and "an epic of the war." Prime Minister Churchill, speaking before the House of Commons, said:

> It is well known that the USA has been increasingly engaged in establishing an air route to China capable of carrying immense supplies, and by astounding efforts and at a vast cost, they are now sending over the terrible Himalayas or Hump as it is called I would not say how many times as much as the Burma Road ever carried in its palmiest days or will ever carry in years to come. This incredible feat of transport at 20,000 or 22,000 feet in the air, over ground where engine failure means certain death to the pilot, has been performed by a grand effort which the USA has made in their passionate desire to aid in the resistance of China. Certainly no more prodigious example of strength, science, and organization in this class of work has ever been seen or dreamt of.

Incidentally, Mr. Roosevelt made a similar comparison of the Hump Airlift with the Burma Road later on. Yet work continued on the Burma Road at the expense of the airlift and at a terrific cost in dollars. We all know now how hard it is to stop a large government project once it is begun.

Some of the finest expressions of gratitude of all came from the Fourteenth Air Force for our "efficient operation of the supply line to China" and giving us a full share of credit for its successful combat operations. In February of 1945, for example, the Fourteenth gave us an official assist in its January bag of 334 Japanese aircraft destroyed; 48 probably destroyed and 215 damaged; 13,500 tons of Japanese shipping sunk; 58,900 tons damaged and probably sunk.

Before the end of July, it became obvious that we were going to set a new tonnage record that month. About that time, one hot, humid, prickly-heat day, I received a message from General Arnold, through General George, calling attention to the observance of Army Air Forces Day on August 1. The General's message went on to say that he would

like for all commands to participate in the celebration in some way. Usually military observance of such an event consists of a parade, a banquet, a round of parties, an open-house reception—something gala. But in that summer of 1945, I was in no gala mood. True, all our military operations against Japan were being carried out with success. From the east, west, and south, we were drawing closer to the Japanese homeland. But in the exhilaration over our victories was the sobering reminder that the time set for the planned invasion of the islands was drawing near. We knew that in the assault on the fortified beaches, in the penetration of the islands which the Japanese could be depended upon to defend with fanatic determination, our forces were going to pay a terrible price. It was estimated that the invasion of Japan would cost a million casualties, with a high percentage of loss of life.

In the shadow of the approaching bloodshed, I saw no reason to celebrate. I sent back a message saying that the India-China Division would work as usual on Army Air Forces Day, but that in observance of the day we would make a special effort to fly more tonnage over the Hump in that twenty-four-hour period than had ever been flown in any comparable period before.

At dinner that evening, and tossing under the mosquito netting for the rest of the hot, damp night, I became increasingly enthusiastic over this unique form of observance.

For the staff meeting the following day I brought in Colonel Lonnie Campbell from the Assam Wing and Colonel Andy Cannon from the Bengal Wing, and my commander in China, Colonel Dick Bonniley, in addition to the regular staff officers. Every man greeted the idea with sincere enthusiasm. It wasn't only that they were industrious, dedicated, and patriotic men, but they were human too. This full-scale effort would at least break up the summer doldrums for a day, and give us a chance to escape our stifling offices, perhaps even the prickly heat. For such a reward we were all willing to put on a special effort to plan the program and carry it through—which meant working like dogs.

As usual, I discussed the operation with each member of my staff, working out a program for each section to follow.

For example:

The *Traffic Department* would provide sufficient equipment at each and every base to haul more tonnage than had ever been hauled before.

Personnel would make sure of a fair and adequate distribution of

pilots and crews, including us swivel-chair fliers at headquarters, who were eager to get behind controls on that day. There'd be keen competition between the bases. Nobody had to tell me that big bets were going to be made, and thousands of dollars were going to change hands. The apportionment of extra personnel must be fair and square.

Flying safety was charged with the imperative duty of making sure that there would be no compromise with safety on that day. There would be no short cuts which would incur risk; no taking of chances. This mandate applied to all sections and departments.

Statistics would see to it that there'd be a prompt flow of information from every base to headquarters and back to every base. Everyone in the division would be interested in the tonnage flown by both his own base and all the others. We wanted reports to come in constantly.

Operations got busy planning the routes to be flown for each base, and take-off and landing procedures for unusually heavy traffic. Not just one plan had to be worked out, but several—plans for bad weather as well as for good, plans for every unusual condition that might come up.

Communications, which could expect an unusually heavy workload, had to begin planning work schedules from that moment on in order to have a large supply of technicians on duty and standing by on The Day. If they got the activity I expected, traffic-control operators, tower and teletype and radio operators were all going to wear out fast.

Supply, of course, had to get in a surplus of everything from spare engines to coffee. And another item that could not be overlooked was cargo. Thousands on thousands of drums of gasoline had to be readied. It would be mighty embarrassing if, after all this painstaking preparation, we suddenly found ourselves with nothing to haul.

Maintenance had the big job of preparation. We needed a maximum of aircraft ready for the big day, yet we could not decrease the flying time or flights across the Hump on the days preceding. We were not a tactical unit which could "stand down" its airplanes and get them ready for a big push. We had daily quotas to make, and they were inviolate. So the mechanics and engineering officers put in double night duty for three days getting the aircraft caught up on their coming fifty- and one hundred-hour inspections, changing high-time engines so that no routine changes would be due on our big day and generally working like beavers without regard to hours. I don't believe Bob White and his small group

of supervisors slept for more than a few hours during this three-day period of preparation.

At our first staff meeting I made it clear that all personnel, with the exception of the barest minimum number necessary for emergencies, should be encouraged to go to the various bases and actually participate in the operation. When the big day came, everybody did just that. They all got out and worked. The whole thing was brand new. Nothing like this had ever been done on the command scale before. Though we kept going at full throttle for the full twenty-fours hours—I don't think anybody slept—there was a camaraderie and a spirit that made it more fun than work. We all pitched in together.

I flew three round trips over the Hump during that twenty-four-hour period myself. And when I reached Kunming, whom did I find there waiting to unload my plane, along with cooks and clerks and Chinese coolies, but my chaplain.

When the day was over, and the statisticians had worn out their pencils figuring up the totals, it was plainly obvious that the India-China Division had made history on Army Air Forces Day. The division had flown 1,118 round trips over the Hump, with a payload of 5,327 tons. This averaged out to just a little over two trips per available airplane. One plane crossed the Hump every minute and twelve seconds. Four times a minute a ton of materiel was landed in China.

One C-54 flew three round trips that day, being in use twenty-two hours and fifteen minutes. Scores of planes averaged over twenty hours a day. And with everybody pitching in to help on the ground, turnaround times also averaged out to a new low. One C-54, returning from one round trip, landed at its India base, received routine inspection, was loaded, and took off with its new crew all in the space of twelve minutes.

"It is with a feeling of great pride in my command," I said in a special message to all bases, "that I announce the following results of India-China Division record lift to China on Army Air Forces Day. . . . You did not turn in this remarkable performance, unprecedented in air transport history, because you had good planes, good weather, and good luck. You did achieve it because each of you, every officer and enlisted man on every base involved, knew his job and gave it all he had. Even cooks and clerks and chaplains pitched in to add another drum or cut another minute from the turn around. It was everybody's day and everybody's

record. From this experience of top production under pressure you have added greatly to our know-how for the future. Above all, you have given the world new proof that American planes plus American equipment are an unbeatable combination. To all of you for your fine teamwork and for the tonnage it took to China go my warmest congratulations."

Lieutenant General Albert C. Wedemeyer, Commanding General of United States Forces, China theater, cabled:

> SUCH AN ACHIEVEMENT COULD ONLY BE ACCOMPLISHED BY HARD WORK AND LOYAL COOPERATION OF EVERY INDIVIDUAL OFFICER, ENLISTED MAN AND CIVILIAN ASSIGNED TO THE INDIA CHINA BURMA DIVISION OF THE ATC. THE ACCOMPLISHMENTS OF YOUR COMMAND ON ARMY AIR FORCES DAY WILL GO DOWN IN HISTORY AS ONE OF THE OUTSTANDING RECORDS OF THE WAR.

Perhaps the most heart-warming result of the big day to me was the accident rate. It was zero. In all that flying, and flying under pressure, there was not one single accident. Indeed, all through the days of August following, the accident rate remained at a new low. There were twenty accidents in the 136,000-plus hours flown that month, a rate of .154, again a new low record for the Hump. It took only a minute's work with a pencil to produce graphic proof that our methods had been successful. If the high accident rate of 1943 and early 1944 had continued, along with the great increase in tonnage delivered and hours flown, America would have lost not 20 planes that month, but 292, with a loss of life that would have shocked the world.

August, 1945, was of course the last big month of the airlift, for that was the month the Japanese surrendered. The war was over, but large-scale airlift, the conception and development of which took place there on the Hump, was just beginning. Halfway around the world, in a forgotten operation over high mountains and dangerous terrain, we pioneered it and established it. Lord knows there were areas in the world where the idea of air transport might have been tested a little more easily, but the Hump was designated as the scene of this great proving ground by the exigencies of war, and perhaps it was just as well. After that we knew air transport would work anywhere.

Every commander of a successful operation owes a great debt of gratitude to his staff, whether he admits it or not. In my case, I received

great satisfaction in observing the men I had chosen knit together, grow up together, and begin functioning together as a smooth, efficient team. They worked long hours, under high pressure, but they got the job done, and they maintained their mutual respect, each for the other. There was no jockeying for position, no attempts of one to trap another. Each man knew his capabilities and those of his fellow officers and used this knowledge for the success of the mission. They were dedicated men, and after a few months of shakedown I would have pitted my staff there in the ICD against any other Army Air Forces staff anywhere. Yet not one had been a professional military man before the war. In my entire command, as a matter of fact, I rarely had more than a few professional soldiers, and among my seven thousand officers, could have counted the number of West Pointers on the fingers of one hand.

Many of my staff members went on to serve in successive emergencies following World War II, climbing on up the ladder of success. Their enthusiasm for the job they were able to do, the job they loved to do, rubbed off on their assistants and junior officers. This zeal for air transport, the willingness and the know-how to get the job done, spread throughout the entire Air Transport Command over the years. That excellent and efficient group of men not only made the Hump the great military success it was, but they were directly responsible for scores of capable junior officers going on to serve the Air Forces well in the technical and demanding field of air transport. Thus on the Hump was set in motion for the future the steady supply of skilled, trained, and oriented experts whose necessity to successful airlift was demonstrated in the same operation. For another maxim proved there on the Hump was that only such men, schooled in and dedicated to air transport, can direct this complex new military service with full efficiency.

In the adversities, the extremes, and the eventual triumph of the Hump Airlift was cast the mold for all future air transport, both civilian and military. Airlift proved itself not merely feasible, but practical, and superior to other transport in many ways. The most efficient methods for its successful operation were developed there in that laboratory at the end of the world; those methods could be picked up and put down anywhere. From the Hump on, airlift was an important factor in war, in industry, in life.

CHAPTER IV

The Orient Project

TO A GREAT majority of the military personnel scattered all over the world in the closing days of World War II, the surrender of the Japanese on August 15, 1945, meant simply that the war was over and they could go home. To a few of us in air transport in the Far East, however, the end of the war was the beginning. For years we had been going about our duties with the goal of defeating the enemy. But in the closing months of the war, particularly in Asia, we began to realize a more positive potential of air transport. Time and events had coincided to bring this little group of disciples of air transport, complete with know-how and equipment, to the very area on the globe most in need of it. The comparatively tiny portion of the world we were operating in, Southeast Asia, contained half of the world's population. Man had lived here for ages. Yet for all their teeming millions, their ancient cultures, these people had practically no knowledge of each other. They had little or no communication with even their near neighbors.

It is difficult to explain to Americans and Europeans, so accustomed to quick transportation, just how nonexistent it was in these lands which abounded in other forms of culture. Calcutta and Shanghai, for example, are two of the great cities of the world. Yet, when I knew them, in 1945, the sole means of transportation between the two was by ship around the Malay Peninsula, somewhat like sending a letter from San Francisco to New York by way of the Panama Canal. It was a long and tortuous and expensive way to travel. Though India and Burma were next-door neighbors, there was no railroad connecting them, none between Burma and China, none between the Malay States and Thailand. In China proper surface transportation was such that it took months to get anywhere. India was just as bad. Three of my most important bases were in East Bengal, now East Pakistan. They were only an hour away by

air, but because of the great Ganges River that lay between them and my headquarters near Calcutta, surface transportation would require several days. We'd have to go down the Hooghly River, which serves the port of Calcutta, to the Bay of Bengal, along the coast for a hundred miles, then up the Ganges to Dacca, from which port the bases could be reached by land transportation.

"You mean to tell me," I said, "that there's no bridge, no ferry, over the Ganges?"

"None that we know of, sir," my informant told me.

"Well, let's make sure about that," I said. "Let's send out a fleet of jeeps to explore every road that bends toward the river for five hundred miles up from Calcutta. Follow every one of them to the end to see if there isn't some kind of a native ferry there."

Finally we located a small ferry at a town several hundred miles upstream. It did us little good, however, as there was only a cow trail leading down into Bengal on the other side. And the ferry was hardly big enough for a cow at that.

With such difficulty in communicating an idea from one locality to another, let alone transporting a bag of rice, it was no wonder that half of that seething mass of humanity lived in poverty and hunger, in miserable surroundings. It was a world of constant conflict, between people and their government, between peoples, between governments. No one knew what anyone else was thinking or doing.

What a marvelous opportunity we had there. With our planes and our know-how we could be of positive help to these unfortunate millions. On the other hand, it was obvious to us, even before the Japanese surrender, that if conditions remained unchanged, revolt and rebellion would soon result. With the lack of communications and transport, actual starvation and plenty could and did live side by side.

I have notes taken at a meeting attended by General Wedemeyer, General Stratemeyer, and me on the very day of the formal surrender of the Japanese. At just about the same time the surrender ceremonies were going forward on the battleship *Missouri* off the coast of Japan, General Wedemeyer was leaning forward in his headquarters at Chungking to point out the imminence of civil war in China. After covering the critical possibility of internal strife in China, and the reasons for it, he strongly recommended that we should do everything in our power to prevent hostilities. We all knew that should it come to a showdown between

Chiang Kai-shek and the Communists, the Communists had a good chance of winning out. Though we were under no illusions about the Generalissimo, we did feel that his government was capable of reform, and we would continue to be able to work with it.

I see by my notes that, after considerable discussion, I took this opportunity to discuss a plan which had been burning within me and which a small group of my staff and I had been turning over and talking about among ourselves for many weeks. I recommended the establishment of postwar ATC routes in order to pave the way for eventual American air transport commercial lines. General Wedemeyer agreed, specifying that in the meantime ATC should operate into Shanghai, Canton, Hong Kong, Tokyo, "and other large Chinese and Japanese cities." And finally, in the next-to-last item of business, I was asked to submit a plan for ATC airline operations between these principal cities.

Thus, on the very day the war in the East officially ended, the Orient Project was born.

Before we could get started with this large-scale plan to tie half the population of the world together, an opportunity presented itself by which we could gain some precious and practical experience. When the war ended so suddenly in two atomic explosions, an unusual military situation resulted in which some two million Japanese, most of whom were toughened troops, remained in occupation of conquered territory with no Allied troops anywhere near them. In the area about Shanghai, which had fallen to the Japanese early in the Sino-Japanese war, three hundred thousand Japanese troops were concentrated. Since MacArthur's troops were busy occupying Japan, somebody else had to get in there quickly in order to accept the surrender. The nearest available Allied force was the Ninety-Fourth Chinese Army, composed of approximately thirty thousand troops and stationed at Liuchow. But Liuchow was 1100 miles south of Shanghai, and between the two points were no railroads, no highways, and no motor transportation. The United States Navy was asked if it could send ships up the river, from Hong Kong to Canton, and transfer the Chinese Army by water to Shanghai. The Navy said indeed it could, but first the mines had to be cleared. That operation would take three months, and the actual transportation of troops another three months. The Ninety-Fourth Army might as well walk to Shanghai.

About that time somebody thought of the Air Force, and General Wedemeyer gave me the job. My staff and I accepted the challenge

eagerly. By this time our teamwork and mutual trust had developed to the point where we liked tough assignments. This one had many difficult features. First of all, Liuchow itself was several hundred miles east of our farthest base in China. From there the route to Shanghai was over territory which was practically all in Japanese hands. It was readily apparent that only the biggest, newest, long-range aircraft could possibly go with these unusual requirements. The situation, of course, called for Colonel Andy Cannon's Douglas C-54's. By now we not only had over two hundred of these big, beautiful beasts, but the know-how in operating them.

I called Andy to Calcutta and we talked the problem over. Our problem, of course, was that in the entire area over which the route lay, including the terminal points of Liuchow and Shanghai, there were no supplies of any kind. Suppose, for example, that our planes were based in Los Angeles, that the thirty thousand Chinese were to be flown from Atlanta to Boston—and that there was not a drop of gasoline nor one item of equipment or aircraft parts east of the Rockies. That would just about size up the situation.

Our solution to the problem may sound a little bizarre, at first, but there was no other. Each plane, before leaving its base at Bengal, would have its gas tanks filled to the maximum, and additional drums of gas to the maximum allowable weight of the plane would be loaded as cargo. The big C-54 would then fly over the Hump to Liuchow, where the drums would be unloaded. The airplane's tanks would be replenished with gasoline from these drums for the round trip to Shanghai. On its return to Liuchow, the plane's tanks would be filled again from the reservoir it had itself brought over as cabin cargo, and would return to its base in Bengal to perform the whole procedure over again. The total round trip would amount to about 4,615 miles, all to fly one planeload of eighty soldiers and their equipment the 1100 miles to Shanghai. Though it seems uncomplicated here on paper, I knew that we would be beset with problems, chiefly in maintenance and communications. I knew that Andy Cannon could handle the job, and in appreciation in advance I named the entire operation after him. From then on it was the Cannon Project.

It had been eight years since Shanghai had fallen to the Japanese. We had no idea of what we would find there. Fortunately, I had an all-around good man—trouble shooter, excellent pilot, good engineer, and

trustworthy commander—in the person of Colonel Richard DaVania, and I sent him to Shanghai in a C-47 to find and secure an airport and get it ready to receive thirty thousand Chinese soldiers. As far as we knew, he and his crew would be the first, and only, Americans in Shanghai.

Dick DaVania's entry into Shanghai was somewhat less than fortuitous. To begin with, his navigator made a mistake in time, and he had to find the unknown city, as well as a landing field, after dark. Finally, with twenty minutes of gas left, he brought the plane down at night on a small field, having no idea whether it would be pockmarked with bomb craters, or crisscrossed with Japanese trenches. Fortunately, it was neither.

A Japanese officer met the plane, saluted stiffly, and informed DaVania that he had no business on the field and would get off immediately. There was no humility then in these Japanese soldiers. They were fat and sassy, still living off the fat of the land, and they didn't understand the surrender at all.

DaVania stood his ground and was finally taken into the city to high headquarters. After a two-hour wait, he was told that he would be turned over to the American mission at the Park Hotel. Dick nodded wisely, but actually this was the first he had heard of the American mission. He was driven to the lobby of the luxurious hotel, and there another discussion began. Suddenly an American civilian strode forward, brushing the Japanese officers aside like coolies. He told DaVania's escort in firm language to stop meddling in American affairs and to leave the hotel at once. He introduced himself as Mr. Healy, and formally escorted DaVania up to the floor occupied by the American mission. DaVania soon divined that the American mission, entire floor and all, was Mr. Healy. He had escaped from a Japanese internment camp a few days before, made his way into the city and, with his command of oriental languages and knowledge of the East, had taken over. Wherever you go, you can always count on finding an American operator there ahead of you. DaVania and his party were provided with lavish rooms, took hot baths, and then sat down to the finest steak dinners they'd had in years.

Next morning Mr. Healy officially recognized Colonel DaVania as the senior American officer in Shanghai and suggested he proceed with full authority. Dick wasn't the bashful type, and although it wasn't ex-

actly easy for one American to arrange with the Japanese for the advent of thirty thousand Chinese to whom they would surrender, he did it. I had in the meantime moved to advance headquarters in Kunming, and DaVania got the word to me that very day that the airport was waiting. Within twenty-four hours the Cannon Project was landing Chinese troops there.

This in itself was ironical, almost comic. The Japanese troops in Shanghai were fine-looking soldiers, big and sturdy, well fed, well uniformed, and well housed. The conquering Chinese Army, however, was a sorry-looking bunch indeed. I doubt if any of the Chinese soldiers weighed over 120 pounds; uniforms were poor to begin with, and the layers of dirt didn't help. They wore sandals with no socks, so that between their sandals and the bottom of the leggings their ankles were bare. Furthermore, they were all lousy, were continually scratching, and in addition, they smelled. I know from personal experience, for I went into Shanghai on one of the first planes in order to look into the dozens of activities a commander should concern himself with—airdrome facilities, requirements to sustain a heavy operation such as adequate personnel to handle operations clearances, supply and maintenance problems that might arise, permanent and transient quarters, communications, and, of course, those delicious steaks. When getting off the plane in Shanghai, it was quite amusing, although somewhat disheartening, to see the bedraggled and filthy Chinese troops climb out of the ship almost literally into the arms of well-armed and robust soldiers standing guard. One could almost see the Japs thinking, *How in the world did we lose to troops like these?*

The food and accommodations in the Park Hotel were fully as good as DaVania had advertised. By the time I arrived, the place was a madhouse, with Americans swarming all over the place signing chits for everything with names like George Washington and Abraham Lincoln. Fortunately one of my young officers, Major Al Harned, had been manager of the famous Cloisters at Sea Island, Georgia, in civilian life, and I brought him in to straighten out the hotel and then operate it. In the meantime, though, it was one big party.

If the hotel was a madhouse, however, the city was worse. Thousands on thousands jammed the streets around the hotel just in order to see a real-live American. The Japanese soldiers, very much in evidence and

well armed, had to rope off the area around the hotel to keep their conquerors off our necks.

This peculiar situation obtained in many of the cities and areas of the Far East. Shortly after this quick trip to Shanghai, for instance, I went in my own plane to Hanoi, then French Indochina, now North Vietnam. With Red Forman piloting the C-54, we located the grass landing strip and circled it prior to landing. Looking down, I could see a large number of troops beneath us and wondered who they were. After Red had brought the plane down and we started taxiing in, I wondered no longer. They were Japanese, fully armed, lining both sides of the taxi way. As I descended from the plane, a Japanese General came marching out to meet me. He was all dressed up with brilliantly shining boots and a samurai sword, and accompanied by a guard of honor of officers. I suddenly realized that he was all dolled up in order to formally surrender the city to me. The last thing I wanted was to take over Hanoi. I was hot and tired, and so was my own guard of honor—Red Forman, Gordon Rust, a red-headed corporal who spoke French, a few staff officers, and a couple of apprehensive GI's. Through the General's interpreter I explained that we were there merely to look the situation over and to arrange for housing in the city proper for a detachment which was coming in. The General provided us with a jeep—American, of course —and we proceeded on into the city. It was a drive of about ten miles, and every half-mile we encountered a concrete pillbox with a detachment of Japanese troops. They snapped smartly to attention as we approached, presented arms as we went by. They were fine-looking soldiers, well uniformed, well cared for.

As we drove into the neat, typically colonial city, we saw no French flags. Instead, every house flew the red standard and gold star of the Annamese National Party—Viet Nam. Posters reading "Independence or Death" were everywhere. We unexpectedly but happily met an American Infantry General, who had just come in with a small party of American troops by a road on the other side of town. He told me he was to run an American military mission there until some sort of order and control took place in that bewildered country. His intelligence people had reported to him that there was great tension in the city, it was bitterly anti-French, and that this very evening all the French were to be killed by the natives. Certainly I have never seen a more terrified people than those French who had remained. And well they might be, for sev-

eral were shot or stabbed nightly—although no major or mass killings did take place.

I discussed with the General our plans for a detachment of men to handle our ATC transport planes as they came in, pointing out that these planes would serve him and other Americans who'd be coming into Hanoi. He gratefully guaranteed to provide the detachment with everything he could get himself.

We stayed in the city too late, for as we drove to the field it was already getting dark. About halfway to the field, in an area where there were no protecting Japanese troops, we saw ahead a huge mob of white-robed milling people, all shouting and making angry demonstrations toward our jeep. They filled the road so we could not pass. When we stopped, they immediately surrounded us. They were all native Annamese, all mad to the boiling point, and armed with a wicked conglomeration of weaponry, mostly long knives or spears tipped with steel blades. They brandished these things at us. I told the officers with me to cock their pistols, and the red-headed corporal to start talking French. He did, and fast. It seemed that the natives had come to the conclusion that we were a party of French returning to take over the colony, and obviously the French were the last people these natives wanted to see. Somehow the corporal managed to convey to them the fact that we were Americans, not Frenchmen, and they simmered down. Finally the line opened up and we escaped the angry natives we had liberated to continue the drive along the road guarded by our erstwhile enemy.

To return to the Cannon Project, it all went off most smoothly. The troop movement began on September 9, and ended September 28, well ahead of schedule. In less than three weeks we flew over four hundred sorties, moving 26,237 Chinese troops well over a thousand miles, between two points far removed from our nearest base. Two subsequent, smaller troop movements brought the total of troops to over thirty-one thousand and about three thousand additional tons of equipment. This made the seventh time within the space of twelve months that we had moved a complete army from one place to another in the China-Burma-India area.

In the meantime, the division was carrying on another project a little closer to the heart of the homesick GI's in that part of the world. This was Project Hope. During September and early October we were averaging one thousand GI passengers a day over the Hump from China, all

homeward bound. By the middle of October we had flown twenty thousand men back to India, the first step on the long road home. All this time we were continuing to fly in supplies for those who were left.

If there had ever been any doubt in our minds as to whether we could take on the ambitious, even grandiose plans for the Orient Project, there was none left after the success of the Cannon Project. It proved that we could do what we had thought we could do all along. And as we penetrated into more and more areas which had previously been occupied by the Japanese, we could see more and more need for it.

Immediately after the war ended, I began putting detachments of fifteen men each at important points as at Hanoi, all over eastern Asia. I could see that Americans would be going into these places, and, what was more important from a humanitarian standpoint, other Americans would be coming out. These would be prisoners, internees, and an occasional poor devil who had been hiding out in the jungle for years. The least we could do for those people was to get them immediately to places where they could be given medical attention, food, and comfort. We had the planes, we had the men, and we began immediately. We soon had detachments operating in Peking, Shanghai, Lanchow, Canton, and other Chinese points, as well as in Hanoi, Bangkok, Rangoon, Saigon, Singapore, all the way down to Batavia in Java.

These detachments got the job done, too. By contrast, when I went to Singapore for the ceremony of the formal surrender of the Japanese to the British on September 12—almost a month after the formal surrender to the American forces—I was amazed to see thousands of English people, military and civilian, men, women, and children, still living in the old tent camps in which the Japanese had held them for years. "Why in the world are these people still here?" I asked. The answer was, simply, that the British had no way to take them out and get them home to England. The food was better now, and the gates were open, but they still remained in the camps, waiting for British shipping. By that time every American internee or prisoner of war had long since been flown out to freedom, through our immediate action.

Carrying on this work brought me closer to the peoples of the Far East. More and more it became obvious that if matters were permitted to pursue their normal course, there was going to be war and strife all through this area. Wherever we went—to the individual cities of China, to Indochina or Cambodia or Thailand or Burma or Java or anywhere,

the people we met were isolated from all the other people. One Chinese city was so isolated from another that neither had an idea of the other's rate of exchange; this worked out well for some of our enterprising pilots who cleaned up thousands of dollars trading in money, but it could only foretell disaster for the residents of those cities. To the south, you would find that the people who are now Vietnamese had no contact with their neighbors in Laos, or Cambodia or Thailand or Burma; none knew the other. As I went from place to place, one thought kept running through my mind: *What this part of the world needs is to be tied together.*

Actually we had started thinking about this even before V-J Day, but events and travel after the Japanese surrender accelerated our planning. If you'll take a look at a map of that part of the world, you'll get a better idea of what we had in mind. Operations in China would be centered in Shanghai and extend to Chinese Turkistan on the west, to Harbin and Mukden in the northeast, and south to Shanghai and Canton. Korea and Japan would be tied in with this network to the northeast, Okinawa and Formosa to the east, the Philippines in the southeast, and what is now Laos and Vietnam, as well as Thailand, Malaya, and Indonesia, to the south—and, of course, Burma and India to the west. In that comparatively small part of the world's area lives a full half of the total population on the planet, and we were going to help those people get to know each other.

I had the full support of General R. A. Wheeler, the India Theater commander, and General Wedemeyer, the China Theater commander, for the Orient Project. They were there; they could see our work. After I had secured their approval, and also received Stratemeyer's O.K., I presented the plan by mail to General George in Washington. He, too, saw its value, and passed it on to higher authority for approval. In the meantime, we got to work planning the entire operation. We already had the planes, the parts, and the airdromes. At war's end we had over two hundred C-54's flying the Hump; we would need only fifty of them. As for personnel, we figured we'd need about five thousand. I had forty-five thousand officers and men already in the theater in the India-China Division, and I had no doubt whatsoever but that the necessary number of them would be more than willing to get in on the ground floor of this exciting new venture. These were men who liked flying, liked air transport, and many of them would leap at the chance to continue in these dramatic surroundings. This would be a peacetime

project, of course, and we planned to get approval to bring the wives and families of the men to them.

We made a plan for every eventuality we could think of for communications, for supply and maintenance, for housing our people. We sat down and worked out actual schedules interconnecting Shanghai, Calcutta, Lanchow, Peking, Kunming, Chungking, Canton, Manila, Tokyo, Seoul, Hanoi, Singapore, Batavia—and all the rest.

In my first letter addressed to all the subordinate commands in the India-China Division, I asked for volunteers for additional postwar service. The letter contained the following sentence: "The activities of the command will become increasingly a foreign airline operation." Here we ran into our first real problems. Some of the men interpreted this to mean that a commercial profit-making airline would thus be operated with military personnel. The rumor also spread that the word "volunteer" was loosely used, and that actually strong pressure would be brought to bear to keep men in the theater. At the time there were still many thousands of American troops in China, and they had to be fed until we could bring them out. The only way we could do this was by plane, so it was necessary to continue the airlift. We couldn't run it without personnel, and it was necessary to keep many men on. This somehow led to the rumor that they were being kept on to run the Orient Project. Both rumors were completely erroneous. When I first heard them, I immediately instituted a public-relations program to inform all personnel in the division of the true facts and purposes of the Orient Project, and that it would be operated entirely by volunteers. But in the meantime another problem came up.

When the war ended, pressure was brought, quite naturally, from mothers and wives and sweethearts and children, to bring their menfolk home. It gave every politician, high and low, a chance to curry favor with the voters by joining in the cry.

One group of congressmen, junketing about the world, came to visit us in India. It was suggested to me by advance wire that it would be nice to search through the command and get together a group of constituents of each of the visiting congressmen. To my later regret I did just this. When the legislators arrived in one of our planes at the Dum Dum airport in Calcutta, I was able to present to each one a group of men from his home district. I'll never forget what one congressman did. He walked to his group, threw his arms around the shoulders of

one very young fellow, led him aside, and without any other preliminaries asked in a loud whisper, "Why are they keeping you here, son?"

The group of congressmen moved on across India to Karachi, where they called a meeting of all the enlisted men in the area, with officers specifically banned. At this huge meeting they called for complaints, and apparently the gripes came in by the bucketful. Most of the bellyaching, however, was concerned with how this martinet Tunner was going to keep all of them in this Godforsaken land against their will to work for some private airline. Naturally the congressmen got steamed up, as well they should have if those had been the correct facts, and dashed back home to stop the foul deed on Capitol Hill.

By the time I had ordered an investigation and separated the rumors and the misinterpretations from the facts, the congressmen were all back in Washington, had rendered a report, and couldn't care less. However, the cry of "bring the troops home" was louder and louder throughout the whole world, and I realized it was going to be difficult to save the Orient Project. Despite the clamor I fully believed we had the right answer, so far as we could provide it with air transport, to the problems resulting from the peace. I was determined to stay there and see it through, and I was convinced I could lick it. In the meantime, using the unwieldy point system, we were sending thousands of men home each day.

The point system was particularly damaging so far as we were concerned because we were one of the few organizations that had to keep operating. Actually there was little difference in what we did in peace and in war. We modified our urgencies to get tonnage moved, imposed much higher safety standards, and did all possible to avoid further loss of life through accidents. Nevertheless men had to be moved out of China and the Indian theaters, supplies had to be gathered so far as possible and brought into depots, the job of closing up had to be accomplished, and we had to fly transports to accomplish these tasks. Many of my staff who were normally civilians had to be sent back and be replaced by others who were career men.

Frequently the men with the highest points were those with specialties we sorely needed in order to carry on our mission. At one base, for example, all the cooks happened to be high in points, and we had to send them all home. At another base the high-point epidemic happened to hit all the sheet-metal workers, so vital to maintenance, and we lost

all of them at once. It was sheer chaos, trying to do anything sensible.

I thought I saw the handwriting on the wall when, just a short time after the division had first been ordered to evacuate all the supplies from Burma—thousands of tons—the orders were canceled and the decision made to sell these supplies to the Burmese government. The price eventually got down to about two cents on the dollar. I could tell from the wires that my staunch supporter, General George, was getting uneasy about continuing with our "Orient-Project" planning.

Then one morning I received a wire informing me that my wife had suddenly been stricken with a serious malady. We had managed to stay together during most of the years of our marriage; our oldest boy, Bill, Jr., was born in San Antonio and Joseph Carruthers in Memphis. When I went to India, however, she and the boys went to live with her mother in Meridian, Mississippi. (She was the former Sarah Margaret Sams of Meridian.) A day or two before, according to the wire, she had taken the two boys to New Orleans to see a dentist, and while there had suddenly and mysteriously lost consciousness. She was at that moment unconscious in Touro Infirmary. The wire closed with a personal message from General George to the effect that since the war was now long over and many men were already home in the States, I ought to go to New Orleans immediately.

I returned the wire saying I would get there as quickly as I could and in the meantime trusted that friends would take care of the two boys. I flew night and day for three days and finally reached New Orleans. By that time my wife had recovered consciousness. Her doctor said he didn't know what it was, but that it could be a brain tumor, and that it might be six months or even a year before he would be able to make a positive diagnosis. In the meantime she seemed quite well again. I took her and the boys back to Meridian and stayed there the rest of the day, then hurried on to Washington.

In Washington I talked with General George for an hour about the demobilization, the effect of the point system, and the future of the Orient Project. He was gloomy about the future of the military in general. He had been getting reports of the disintegration of our forces all over the world, due largely to the cry, "Let's go home!" and the point system. But he gave permission to continue with the project, at least for the moment.

Back in India, after spending nine days away from the job, seven

in continuous travel, I pitched into the battle for the Orient Project again and began making some solid headway.

A month later, while I was flying to Peking to set up a detachment there, another wire came to me on the plane. My wife had had another attack, the cause had been definitely diagnosed as a brain tumor, and the doctor wished to operate as soon as I could get there. Again my thoughtful friend and boss advised me to come home. After another three-day, night-and-day trip, I arrived in the United States on November 11. The operation next day proved the diagnosis correct, but the tumor was in such an area that nothing could be done. Sarah remained unconscious after the operation. It was necessary for me to arrange for her care and the care of the two small boys. She lingered on for a year and a half, still comatose. Then she died.

And the Orient Project collapsed. The boss had run out on his own project, and those who had volunteered lost faith.

I am positive that had I been able to remain in India, I could have held the project together long enough for some airline to take over. I had no intention, nor did I ever have any, of running it myself after it got well under way. I fully trusted that some United-States–sponsored airline or Allied consortium would happily move in.

I wholly favored the philosophy espoused then and even in these late years by Pan American's Juan Trippe of a single "chosen instrument" airline, but a chosen instrument only for the immediate area of Asia. In other words, I favored a single national airline for the United States, just as Air France, BOAC, KLM, and Lufthansa today operate for their respective countries, but never did I espouse nor sponsor a "chosen instrument" airline for all United States overseas air transport operations, as most other countries seem to. I did see a real need for the philosophy in the area of the Orient Project—in the Far East.

I still had the backing of three strong and farsighted men in General Wheeler, General Wedemeyer, and General George, and with them behind me, and me on the scene, I knew we could have gotten the volunteers for an enterprise which could not fail to become an international force for good will, understanding, and peace, as well as a successful commercial venture for someone. I am still positive of this despite the fact that admittedly the enthusiasm of the high echelons in Washington had become lukewarm by that time. They were desperately struggling, in the face of demobilization, to prevent a complete break-

down in the military establishment. As for the opposition of the politicians, it was based on the public clamor for the boys to come home rather than on any objection to the Orient Project per se.

Would the Orient Project have prevented some of the calamitous occurrences in that part of the world since the end of the war? My answer is yes. We know what happened in the Far East *without* the Orient Project, and it is safe to say that with it, events could hardly have been worse. I do not believe that the Orient Project would have saved Indochina for the French, Malaya for the British, nor Indonesia for the Dutch; that was certainly not its purpose. But I do think that improved communication and transportation in that part of the world would have done much to alleviate the strife and misery that is now taking place in China, Vietnam, and Laos, and would have been a positive factor in helping those people find a stronger, happier, more stable form of life than they have. People who lived side by side, across a valley or over a mountain from one another, and who had prosperity on one hand and famine on the other, would at least know there was food somewhere; better, they would have a means to move critical supplies to the destitute or deprived areas.

As a career man in the Army Air Forces, a regular officer, I would have remained in China as long as I was needed, and as long as my bosses desired. For it would have been in China where the Orient Project would have had the most beneficial results. It would have tied that sprawling land together with a strong transportation network. When the war ended, there was certainly no great camaraderie between the Communist forces and Chiang Kai-shek's government, but at the same time there was no civil strife between the two forces. They had been fighting a common enemy, not themselves. When the war ended, they no longer had this bond, nor was there any communication whatsoever between the two sides. War gradually materialized, grew hot, and the Communists won. If there had been trade, transportation, and transfer of ideas and information, I do not believe that, in the first place, there would have been civil strife on such a scale.

And if there had been, there is every reason to believe that, had the country been laced with a network of airlines, the Communists would not have won. After the civil war, I discussed this whole question at length with Whiting Willauer, president of Civil Air Transport, Incorporated, one of three small airlines which tried to operate in China after the

war, and later an ambassador in Central America. Willauer pointed out many interesting factors which support my belief that the Orient Project would have saved China. For one thing, he said, Communist forces during the civil war demonstrated effectively that they could immobilize every form of transportation except air transport. The Chinese timetable in the civil war was delayed by at least a year, Willauer maintains, because of the transportation furnished to the Nationalists by the three small, unconnected airlines. The Communist sweep southward was delayed at a number of vital points, each of which was supplied exclusively by air for six months or more.

Though America in various aid programs gave to China railroad equipment, trucks, and ships exceeding two hundred million dollars in value, these and other surface transportation facilities actually accelerated the advance of the Communists. Neither boxcars nor trucks nor river steamers can fly away in a successful retreat. Thus, as the Communists advanced, they obtained more and more surface transportation equipment, enabling them to travel that much faster.

Willauer pointed out the great effect of planes on the morale of the people. The Chinese, like nearly all peoples of the Far East, were still in awe of the airplane. It is a unique symbol of support seen by millions in both cities and the rural areas. The morale factor expresses itself even more directly in the case of those soldiers and key civilians who know that should the worst come to the worst, a sure-fire evacuation route is open to them by air, Willauer's employees were still cheerfully going about their tasks, even under gunfire, right up until the last minute, for they knew that they would ultimately be flown safely away.

"This same sense of security must be imparted to the workers, the soldiers, and the officials of other Far Eastern lands if we expect them to offer stiff resistance to Communist advances," he said.

And so a solidly potential solution to the troubles of the Far East died before it even began. The positive achievements we had accomplished on the Hump seemed so remote after the failure of the Orient Project. Personally, I was plunged from the peak of accomplishment and the glory of success to the depths of grief and the despair of failure. I still do not know how I could possibly have taken any different course of action, but I do know that my leaving Asia meant the death knell of the Orient Project and whatever that might have meant to the Asian problems of today.

CHAPTER V

The Berlin Airlift

FRIDAY, Black Friday, Friday the thirteenth of August, 1948, is a date many of us who served on the Berlin Airlift wish we could forget. It was a day of black scudding clouds, of driving rain. Weather conditions were not too bad at Wiesbaden as we took off for Berlin, but as we gained altitude to clear the Harz Mountains we soon ran into those heavy, thick German clouds that later caused Bob Hope to remark, "Soup I can take—but this stuff's got noodles in it!" Lieutenant Colonel Sterling P. Bettinger was piloting my C-54, good old Number 5549, which had served me so well on the Hump, and my old friend Red Forman was copilot. I sat on the jump seat behind them and helped them peer at the dark gray nothing ahead through the rain-washed windshield.

We were not alone in the sky. As Bett followed the prescribed flight path to Tempelhof Field, calling out into the radio mike the exact second he passed over the Fulda beacon and swinging the nose of the plane to the exact heading of 057 degrees, we knew that some twenty C-54's were flying the same route ahead of us, each three minutes apart on the nose, each proceeding at 180 miles per hour. Ahead they stretched out like figures on a conveyor belt; behind we could hear each addition to the club as he passed over Fulda and gave us his time, loud and clear. All was well. The Berlin Airlift was seven weeks old. I had been its commander just fifteen days, and already, I felt, it was beginning to shape up into my kind of operation.

But at that very moment everything was going completely to hell in Berlin. The ceiling had suddenly fallen in on Tempelhof. The clouds dropped to the tops of the apartment buildings surrounding the field, and then they suddenly gave way in a cloudburst that obscured the run-

way from the tower. The radar could not penetrate the sheets of rain. Apparently both tower operators and ground-control approach operators lost control of the situation. One C-54 overshot the runway, crashed into a ditch at the end of the field, and caught fire; the crew got out alive. Another big Skymaster, coming in with a maximum load of coal, landed too far down the runway. To avoid piling into the fire ahead, the pilot had to brake with all he had; both tires blew. Another pilot, coming in over the housetops, saw what seemed to be a runway and let down. Too late he discovered that he'd picked an auxiliary runway that was still under construction, and he slithered and slipped in the rubber base for several precarious moments, then ground-looped.

With all that confusion on the ground, the traffic-control people began stacking up the planes coming in—and they were coming in at three-minute intervals. By the time we came in, the stack was packed from three thousand to twelve thousand feet. A space was saved for my plane at eight thousand feet, and we flew right on into it. Planes behind us, however, had to climb to the top of the stack—God knows why there were no collisions. As their planes bucked around like gray monsters in the murk, the pilots filled the air with chatter, calling in constantly in near-panic to find out what was going on. On the ground, a traffic jam was building up as planes came off the unloading line to climb on the homeward-bound three-minute conveyor belt, but were refused permission to take off for fear of collision with the planes milling around overhead.

"This is a hell of a way to run a railroad," I snarled. Red and Bett wisely said nothing. They knew I had full confidence in both of them, but they were also aware that at that moment I'd have snapped my grandmother's head off.

There could have been no worse possible time to foul up the works. The very purpose of my trip to Berlin was to attend a ceremony honoring this efficient, smooth-running operation. Several days before an old German, a resident of Berlin, had brought us a present. It was, he said, as he tenderly removed a magnificent watch from its velvet-lined case, the only thing he had left in the world. Of heavy gold, inlaid with precious stones, the exquisite old timepiece had belonged originally to his great-grandfather. It must have been worth five thousand dollars or more, and to the old Berliner, surely it was priceless. Yet he wanted

to give it to us, the men of the Berlin Airlift, as "a little token from an old and grateful heart."

I had accepted his watch in the spirit in which he had given it, and, for want of a better idea, had told him that I would present it to the pilot who had made the most flights into Berlin to date. This was fine with the donor. Headquarters found the pilot who had flown the most missions—his name was Lieutenant Paul O. Lykins—and my staff in Berlin made arrangements for the presentation ceremony at Tempelhof on August 13. They set up a speaker's stand, brought in a band, and put together a complete program, culminating in my presenting the watch. We anticipated thousands of people.

And here I was flying around in circles over their heads. It was damned embarrassing. The commander of the Berlin Airlift couldn't even get himself into Berlin.

I'd been in stacks before, and I'd be in stacks again, but being the middle man in this particular totem pole was unusually confining. Usually, when it's necessary to stack up planes, the tower sends them to a prearranged area fifty to one hundred miles away from the field to fly their monotonous circles in the great open spaces. Here we had no such spaces, just the twenty-mile circle over the island of Berlin, a city surrounded by Soviet-controlled East Germany. If we got out of that small circle over the city proper we could well attract Russian fighters or anti-aircraft fire. So we were stuck. All these milling planes had no choice but to land or go back where they came from.

Back where they came from. I grabbed the mike.

"This is 5549," I said. "Tunner talking, and you listen. Send every plane in the stack back to its home base."

There was a moment of silence, then an incredulous-sounding voice said, "Please repeat."

"I said: Send everybody in the stack below and above me home. Then tell me when it's O.K. to come down."

He got the message that time. "Roger, sir," he answered.

I was sitting in the copilot's seat at the time. Bettinger, who was flying the plane, and Red Forman, leaning over between the two of us, looked at me with their mouths open.

"And as for you two," I said, "I want you to stay in Berlin until you've figured out a way to eliminate any possibility of this mess ever happening

again—*ever!* I don't care if it takes you two hours or two weeks, that's your job. I'm going to give this guy his watch and then I've got some business to attend to with those monkeys in the tower . . ."

The history books dealing with that unsettled period in which the cold war began may disagree, but to my mind the real success of the Berlin Airlift stems from that Friday the thirteenth. Actually the Airlift had begun fifty-one days before, the day after the Russians put in the Berlin blockade.

News of the blockade, three years after the end of World War II, had come as much of a surprise to me as to most other American citizens. I, too, had been trying to begin a normal life after the war, but in my case it wasn't possible.

As, in the halcyon days following the war, the nation stripped its great military machine to the bone, I was shunted from place to place closing down commands and consolidating them. It was not a pleasant task. I also fully expected to be put back in rank, as was happening to many of my fellow brigadier generals. During my brief stay at one post, however, General George called to congratulate me on my promotion to major general, much to my surprise, not to mention pleasure. At least, as I moved for the fourth time, I was wearing another star on my collar.

That star also changed any regrets over a decision I had made. I had been approached by a group of highly respected financiers who planned to organize a global air service to be called World Air Freight, Inc. It would be heavily capitalized, with retired General Hap Arnold chairman of the board. I would be president, with a salary many times my general's pay. After the multiairline Ferrying Division and the five hundred planes on the Hump, running a civilian air freight line of fifty C-54's seemed to present few problems, and I agreed to the proposition. It occurred to me that a military man would work twelve hours a day, often seven days a week, to run an organization ten times as large as a comparable one in the business world, and receive pay and benefits of one-fifth that of the businessman. C-54's were selling for a song as government surplus, and I located several in excellent condition. The New York group prepared an elaborate prospectus for presentation to the public, but almost at the last moment I decided against making the move. There were many factors in my decision—the grief and confusion

resulting from my wife's comatose condition, being both father and mother to Bill and Joe, the letdown from years of constant driving, the disappointment over the demise of the Orient Project—but primarily, I found, after considerable reflection, that I just did not want to leave the Air Force. I recommended Temple Bowen, my loyal deputy on the Hump, but apparently the group felt that I was essential, and so World Air Freight went the way of the Orient Project. It would have been a financial success; we were confident that we could drum up the business and we had personnel with a good solid background to do the flying. The C-54's we were going to buy at $75,000 apiece became worth $675,000 each when the government needed them for the Berlin Airlift and later the Korean War. That would have been almost $30,000,000 profit right there. Hap Arnold was furious with me for not taking the job. I ran into him at a cocktail party in Washington, and he practically took my head off.

"If it wasn't for you, Tunner," he said "we would all be operating a great airline by now." But then he turned on the famous smile which had given him his nickname, and added, "But I don't blame you for staying with the Air Corps, Bill." I felt better.

Early in 1948 the whole of the Air Transport Command was combined with a few squadrons of the Naval Air Transport Service to become the Military Air Transport Service. It was to have been a great combining of competing service activities, just what the public wanted. Actually, when it was accomplished, we found we had about eighty thousand Air Force people and four thousand Navy, and it remains in even greater disproportion today. Major General Laurence S. Kuter was picked to be its first commander, and he chose me as his deputy commander for Operations.

I'd been in my new job only a few days when news from Berlin began making the headlines. After the surrender of Germany, the country had been cut into East Germany, under Russian occupation, and West Germany, with zones occupied by the Americans, British, and French respectively. The city of Berlin, occupied by all four powers, was located deep within East Germany. In the happy glow of friendship at the immediate end of the war in Europe, the free powers occupying Western Germany had apparently been content with a gentleman's agreement

to the effect that there would be no interference with surface transportation—by highway, rail, and canal—into Berlin.

Later a written agreement was made setting up six air corridors, each twenty miles wide, fanning out from Berlin. Three led to the east or Communist areas. Of the other three, one led northwest to Hamburg and one west toward Hanover, both in the British Zone, and the third led southwest to Frankfurt and Wiesbaden in the American Zone. At the time Russia seemed to have made the best bargain, for as part of the deal America set up navigational aid stations and showed the Russians how to man them. Apparently they had no knowledge whatsoever of this new science.

It was the reform of currency in West Germany which triggered the Berlin trouble. On June 19, the day after the reform became effective, Marshal Sokolovsky, Soviet Military Governor of Berlin, issued an angry statement in which he referred to Berlin as "part of the Soviet occupation zone." The Germans residing in the American, British, and French zones of the city making up West Berlin were terrified. They remembered all too well when the Russian troops poured into the city to rape, loot, and murder. It was obvious that the Soviets intended to drive the Western powers from Berlin and engulf the whole city.

By June 24 the blockade was complete. Reason given for the termination of rail service was "technical difficulties." Bridges were declared unsafe, and a one hundred-yard stretch of the railroad was torn up. No foodstuffs, or any other supplies, could be brought into the three western zones of the city by surface transportation. The Soviets announced that all food brought into Berlin from East Germany would be distributed in the East Sector only; it would be necessary for residents of West Berlin to register there in order to get it. Few did so. When the blockade began, food stockpiles were sufficient for thirty days. Mayor-elect Ernst Reuter, addressing a mass meeting of over eighty thousand Berliners on the afternoon of June 24, called for a united defiance of Communism and was answered by a roar of approval.

The first reaction of General Lucius D. Clay, United States Military Governor, was to propose putting an American armored column on the road to Berlin immediately. In Washington the Joint Chiefs of Staff considered this proposition and approved it with the proviso that the armored column would not attempt to shoot its way through; if the

Russians stood fast, the convoy would withdraw. It was well known that the Western powers had only a few weakened divisions in Germany; the Russians had thirty full-strength divisions in their zone, backed up by many more in Poland and Czechoslovakia. Clay refused to proceed under those conditions. "I'll never order troops of mine to run from the Reds without a fight," he said.

There was no recourse but to take to the air. To supply American forces in Berlin by air would not present too much of a problem; many items were already being flown in from bases in the American Zone. But what about the civilian population? Could an airlift provide the 2,250,000 people of West Berlin with sufficient supplies? Suppose the blockade extended into the winter, when the population would be subjected to the even greater privations of cold and darkness?

At this point, even to think of supplying a city by air alone was daring. It had never been done before. Although we who had operated the Hump Airlift considered that we had proved the capability of airlifting anything anywhere, there were many in the government and in the military, too, who had not heard the word. The Hump had obviously been carried out in a vacuum on the other side of the world in the midst of a global war.

It was finally decided, there in that frenzied session the evening of June 24, that food could probably be brought in by air. But even at that stage General Clay and his staff could see that the commodity which would place the greatest strain on an airlift would be coal—coal to furnish light and power to keep the city going and, in the long winter to come, to provide some warmth.

Clay impulsively put in a call to Major General Curtis LeMay, commander of USAFE.

"Curt," he asked abruptly, "can you transport coal by air?"

For a moment there was silence on the line. "I beg your pardon, General," LeMay said, "but would you mind repeating that question?"

Clay did. This time LeMay answered promptly. "Sir, the Air Force can deliver anything."

Immediately, LeMay began mobilizing the aircraft at his disposal. In all of Europe the Air Force had just exactly 102 C-47's, of less than three tons capacity, and two C-54's, of ten tons capacity. The British also had a few C-47's—which they called Dakotas—on hand. This was

the fleet which was going to supply the city of Berlin. The Airlift ran more or less by itself until Brigadier General Joseph Smith, commander of the military post at Wiesbaden, was tapped for the job in addition to his other duties. The news was broken to him at lunch on June 27. In the first forty-eight hours, eighty tons of flour, milk, and medicine were flown into Berlin. By July 7 the one thousand-ton mark was reached. This included the first shipment of coal, packed in GI duffel bags.

During these first few days an attempt was made to glamorize the airlift with a fancy name. "Hell's fire," Smith said, "we're hauling grub. Call it Operation Vittles." The British sneaked in a pun on their title: Operation Plane Fare.

Before the blockade, the city imported 15,500 tons of material daily to meet its needs. Minimum requirement for survival was estimated at four thousand tons a day. Clay, at the beginning, estimated seven hundred tons a day as the maximum to be expected from even a "very big operation." No one in authority at the time expected the Airlift would last very long. It was President Truman's opinion that the Airlift would serve only to stretch out the stockpile of rations in Berlin and thus gain time for negotiations. Even so, when pressure was put on him to pull American troops out of Berlin, he said, "We're going to stay, period."

MATS had less than three hundred C-54's at that time. There were about that many more in other Air Force commands, particularly the troop-carrier command. There had been some hesitancy to commit them—suppose trouble happened somewhere else? But following the President's blunt statement, more squadrons began moving to Germany.

In the meantime, back in Washington, I was beginning to get restless. With an airlift taking place in the world, I did not enjoy warming the bench in Washington. As Deputy Commander of MATS, I felt that if there was any air transport activity going on anywhere in the world, this activity automatically became our responsibility. I reported this to General Kuter, putting it in writing to show him I was dead serious. I said that I did not think that we could ignore what was going on in Germany. This was what Congress created MATS for. I ended with the strong recommendation that he propose to the Chiefs of Staff that MATS get into this thing all the way, right away.

He read my memorandum and calmly told me to relax. "That's not

the way to do it, Bill," he said. "Let's just sit tight and see what happens."

I did, but I didn't feel that it was right. No one in the world had our air transport techniques; we had developed them in the old Ferrying Command and later the Air Transport Command. Kuter blithely took off for an inspection tour of MATS operations in the Pacific, leaving me to mind the store and to fret about Berlin. By now the great significance of the Berlin Airlift was becoming apparent. Just three years before these people had been our enemies. They had undergone bombing and then the postwar deprivations. But now, when the chips were down, they were choosing freedom. The world by now had definitely split itself into two armed camps; the free, Western world, and the slave world of the Communists. This was the first conflict. The forces of freedom could not afford to lose it.

Yet I could tell, from the reports coming in, that the operation of the Airlift could stand improvement. The capability of an airlift was unknown in Europe. It was generally unknown in our military. It is not strange that it was unknown to Clay. I knew both General LeMay and the actual commander of the Airlift, Joe Smith, and admired and respected them both as combat officers. But this was not combat. In air transport everything is different—rules, methods, attitudes, procedures, results. Even when the tonnage carried by American planes rose to 1500, as it did by mid-July, and the British tonnage to 750, for a combined figure that had not even been dreamed of three weeks before, I remained convinced that the operation was a job for professional airlifters. To any of us familiar with the airlift business, some of the features of Operation Vittles which were most enthusiastically reported by the press were contraindications of efficient administration. Pilots were flying twice as many hours per week as they should, for example; newspaper stories told of the way they continued on, though exhausted. I read how desk officers took off whenever they got a chance and ran to the flight line to find planes sitting there waiting for them. This was all very exciting, and loads of fun, but successful operations are not built on such methods. If the Airlift was going to succeed and Berlin to remain free, there must be less festivity and more attention to dull details, such as good, steady, reliable maintenance.

But I wasn't the only person who thought the Airlift should and could be improved.

One morning about two weeks after I had first strongly recommended that MATS take over the Airlift, an officer brought me a sealed envelope from General Hoyt Vandenberg, Chief of Staff of the Air Force. In the envelope was a copy of a highly classified message to General Vandenberg. It was marked *eyes only,* which means that the moment it had been deciphered it was placed in a closed envelope and delivered to General Vandenberg in person; nobody else could open it. Now he was entrusting the message to me. I could see why. It was from Lieutenant General Albert C. Wedemeyer, Director of Plans and Operations of the Army General Staff. General Wedemeyer had commanded the China Theater during much of the time I was running supplies over the Hump, and as a long-time recipient of a successful airlift, he had first-hand knowledge of its capability. He had gone to Germany to look the situation over, and obviously the operation of the Airlift there looked different from the one he had known in China. He had discussed the problem with General Clay at length, and had then fired off this *eyes only* message to the top man in the Air Force.

The message, as I recall it, began with a straight declaration of fact to the effect that the Berlin Airlift was definitely capable of either breaking the blockade, or of maintaining life in Berlin while negotiations were going on. He had seen an airlift work in China, Wedemeyer continued, and he thought that to insure the success of the Berlin Airlift the man who had run that airlift should be sent over to Germany to run this one. General Clay, the message continued, was of the opinion that he had all the know-how and all the people necessary to run the Airlift properly, but nevertheless he, Wedemeyer, felt strongly that the Airlift should be entrusted to someone who had run one before. Again he recommended that Tunner be sent to Germany to take it over.

No orders followed the message, however. Several days went by, and I remained in Washington. It was obvious to me what was going on over in Germany: The proposal that I take over the Airlift would be opposed by Clay, LeMay, and Smith. Clay's opposition was based simply on the fact that the Airlift seemed to be working, with tonnage going up every day, so why rock the boat? As for LeMay, he had a good thing going, and it was perfectly understandable that he would prefer to remain in

control of it rather than have some hot-shot come in to throw his weight around. Maybe I would have felt the same way in his place. By this time the LeMay Coal and Feed Delivery Service, as it was jocularly referred to on both sides of the Atlantic, was making headlines all over the world. The bases in the American and British zones and the two airdromes in Berlin were crawling with journalists and observers. There was a constant air of hustle and bustle, and excitement. And still the tonnage increased. There was no question but that LeMay and Joe Smith were doing a marvelous job, and they were justifiably proud. Had I suddenly been placed in command of a bomber force in a hot war, I would certainly have been happy to have done as well. But the fact nevertheless remained that airlift experts run airlifts better than combat experts. The hustle and bustle and excitement of Operation Vittles in the early days all comprised a case in point. The last place you should find this type of activity is in a successful airlift. The actual operation of a successful airlift is about as glamorous as drops of water on stone. There's no frenzy, no flap, just the inexorable process of getting the job done. In a successful airlift you don't see planes parked all over the place; they're either in the air, on loading or unloading ramps, or being worked on. You don't see personnel milling around; flying crews are either flying, or resting up so that they can fly again tomorrow. Ground crews are either working on their assigned planes, or resting up so that they can work on them again tomorrow. Everyone else is also on the job, going about his work quietly and efficiently. The real excitement from running a successful airlift comes from seeing a dozen lines climbing steadily on a dozen charts—tonnage delivered, utilization of aircraft, and so on—and the lines representing accidents and injuries going sharply down. That's where the glamour lies in air transport.

This, I presume, is what General Wedemeyer had seen in our operations in India and China. At any rate, he returned to Washington and went in to see Vandenberg. I learned later that Vandenberg was seriously considering sending me over anyway, but the visit from Wedemeyer, a highly respected senior officer, tipped the scales. Vandenberg called me to his office.

"O.K., Bill," he said, "it's yours. When can you leave for Berlin?"

"Right away, sir," I said. While the iron was hot, I asked his permission (General Kuter was still in the Pacific), to take with me a few highly

trained men, in whom I had confidence, in order to get under way immediately. I promised to use discretion so that the work of MATS or any other organization I got them from would not be disrupted.

"Get going," Vandenberg said, "but be reasonable. Tell Personnel the names of the people you want, and their orders will be cut right along with yours."

Not all the men I would have liked to take were available. Temple Bowen had retired, Gordon Rust and Hammie Heard were with civilian airlines, Ike Teague was back with his Little Rock law practice, Ken Stiles was the assistant to the director of the United States Budget, and Eddie Hastings was managing the Waldorf-Astoria Hotel, in New York. But some of the old faces were still available, and there were several younger men whom I had come to know and to have full confidence in.

Heading the delegation of Hump old-timers was the red-headed colonel whom I'd first known as a civilian weekend flier back in Memphis, Red Forman. He would be my chief of operations. Next came Major Edward A. Guilbert, who had handled traffic for me on the Hump. For the new operation he would be the over-all director of traffic, responsible for the handling of cargo all the way through—loading it, unloading, and accounting for it. Even if Eddie hadn't been the expert that he was in his field, I think I would have brought him along for his good common sense as well as the sheer pleasure of his companionship. Ed was the fun-loving rover of our crew. No matter how dire the circumstances, he always had a smile and a joke, which did wonders in relieving the tension.

It was particularly good to have with me as supply officer Lieutenant Colonel Orval O. McMahon, whom I had first met years before in Memphis. He had been a staff sergeant then and had been loaned to me for a few weeks to set up my small supply and purchasing shop at the airport. I had been impressed with his knowledge and soundness and brought him into the old Ferrying Command at the first opportunity. Here he was again.

I knew that there would be problems in airdrome construction, but I also knew that if I had Lieutenant Colonel Kenneth E. Swallwell along as director of Air Installations we'd be all right. Kenny had proved himself in India, where ingenuity and originality paid off. I had known Lieutenant Colonel Manuel "Pete" Fernandez since the days of the

Ferrying Command, when he ran our one and only school for radio mechanics and operators in Nashville. On the Hump he had served as assistant communications officer; now he was an unqualified expert in the field and ready for the important job as my chief of communications. Pete's parents were Cuban, and he would occasionally slip a Spanish word into the conversation to liven things up. He seemed to be a little older than the rest of us, but exactly how much we never knew, for despite all our kidding questions Pete never told us his true age. In addition to his other talents, I can flatly state that Lieutenant Colonel Fernandez, United States Air Force, was the world's premier scrounger. You name it, and Pete could not only find it, but come back with it and put it to good use.

Though he was still quite young, without the seniority required for the job of chief of maintenance, I nevertheless wanted the Hump-proven genius of Captain Jules A. Prevost, and I brought him along to serve as first assistant to whomever I would select for the post. Prevost had turned in a brilliant performance as wing maintenance officer in India, mastering the new, revolutionary production-line maintenance system introduced by Bob White. We would definitely have some form of PLM in Germany, and I wanted young Prevost there to make sure it worked.

Those were the officers making up my crew of old reliables. Most of the other officers I took with me had come into air transport in the three years after the war. Another young officer, one who would obviously be a success in any operation he took on, was thirty-one-year-old Colonel Theodore Ross Milton. Ross, a big, good-looking, heavy, slow-talking fellow—at this writing a major general commanding the Thirteenth Air Force in the Philippines—had last seen Germany as commander of a group of B-17's. Just five years before he had led his group on the Regensburg raid, the most hazardous, and, though successful, most costly operation in the history of the United States Air Force. Now I was bringing him back to help the people who had shot at him that day. Likable, admirable, and a man of full integrity, Ross would be my chief of staff. He did a dependable job all the way through.

Captain Raymond Towne, a former B-26 pilot in Italy and a fine young officer with a flair for writing and public information, went along to be my public-information officer and editor of the newspaper I'd already decided to have. I took First Lieutenant William G. Thompson,

another talented young officer, to be Towne's assistant. It worked out later that we needed the versatile Towne in operations and it was Thompson who was PIO and editor.

I'd run across a young captain named Robert Hogg after the war and liked his administrative ability. He was highly educated, an intellectual and an extrovert—a good man to have in the front office as staff secretary. The name Hogg, he informed me pointedly, is pronounced "Hoag," and is a Scottish word meaning an unshorn lamb, a good thing to know. When Bob had finished his tour of duty in Europe, I grabbed him for my administrative officer at Westover Field, and reluctantly left him there when I came to Washington. Now, thanks to my high priority, I got him again, and I flew to Europe by way of Westover Field in order to pick him up. And then I happily added Captain Harold Sims, a navigator from the old Ferrying Division days, who had navigated dozens of bombers across the South Atlantic. I would need someone with his training to do the route planning through the corridors.

When I looked around me on the plane and saw my staff of twenty hand-picked officers, plus Miss Katie Gibson, I was really delighted. Never had I felt so good about a staff; here was a marvelous collection of talent. Enthusiastic and dedicated, we were, all of us, off on an enterprise about which we knew nothing other than that, with us on the job, it was going to be finished promptly and properly. I did know that even at this stage I was further along than I had been when I first took over the Hump. For I knew that already in Germany was a large number of aircraft crews who had learned their know-how and earned their laurels in the old ATC and on the Hump. A pilot who had completed a tour on the Hump could go anywhere any pilot could go and return safely.

And I also knew the equipment I'd find there. No more C-46's. We were going to fly the best, the plane that had proved itself on the Hump, the fine C-54 of Douglas Aircraft, structurally foolproof and a joy to every pilot who ever flew one. These fine men and this excellent equipment deserved the same practices and techniques, the same standards of living and the proven rigidity in flying procedures and flying safety that we had developed in India.

Even on the flight over the Atlantic my new staff began working together, proving themselves to be all I could ask and more. None of us, incidentally, expected to be away very long. I had told my housekeeper

I'd be back in ninety days. I'd placed Bill, my older boy, in boarding school, and left Joe with Red Forman's wife Betty. I'd parked my car by the Operations Building.

On the long trip over I outlined to each man just exactly what his job would be, and each man in turn began making a list of the particular problems he had had in India in an effort to be prepared for the problems which would arise in Germany. Before the flight was over, we were even writing directives there on the plane. Miss Katie filled her notebook with shorthand.

When we arrived late in the day at Wiesbaden, I reported immediately to General LeMay, under whose command I would be. He received me with no sign of rancor, no grudge whatsoever. I had been ordered by higher authority to come over and run the Airlift, and we both accepted it at face value and let it go at that.

"I expect you to produce," he said.

"I intend to," I said.

As I had arrived after office hours, I'd found LeMay at his quarters, a fifty-five-room mansion run by a staff of fifteen servants. It was a beautiful home, exquisitely furnished with fine oriental rugs and the best of European antiques and paintings. It belonged to the Henkell family, makers of champagne, but had been requisitioned along with eight hundred other houses for the use of Air Force families. From this palatial residence I went to my quarters, a third-floor walk-up in the Schwartzer Bock Hotel, overlooking a block of burned-out buildings. The door to my single room was opened for me, and I found myself looking into the bathroom. That was the only way you could get into the one-room quarters of the commander of the Berlin Airlift—between the tub and the commode. It was pretty obvious that I was in Germany at the command of General Vandenberg, not at the request of anyone in Europe. Actually, I didn't mind the poor quarters, for I was delighted with the challenge of the Airlift. I was not happy, however, when I realized that my people would be given even worse housing.

We were in for more of a shock next morning, when we first saw the facilities placed at our disposal for Airlift headquarters. It was an apartment house, and it had really taken a beating. The floors were covered with debris, the walls were filthy. There were no desks, no chairs, no telephones. We rounded up a group of German civilians to clean it up,

put Orval McMahon on the job of securing furniture, and got Pete Fernandez to work right away on telephones and teletypes.

We did not realize then that Airlift headquarters would become and remain for a considerable time a small island of activity in the midst of the lazy life of the occupation forces. Military life in occupied Germany was not unlike life in the peacetime Army back in the twenties and thirties. Everybody would put in his stint of a couple of hours' work in the morning and then take off for several hours of serious activity—scrounging. The postulate that Americans in Germany, even those entrusted with feeding two million people by air, would waste their time working was simply too much for them to accept. As we were just getting started fixing up our new headquarters that morning, a fresh-faced airman appeared with word from the adjutant that we could all come around that afternoon to pick up our PX cards and commissary cards. It was as though that was all we had to do. I gathered all my people around me in the dingy third-floor room I'd chosen for my office, and had a brief little conference.

"Now look," I said, "we came here to work. I'm not asking you men to put in twenty-four hours a day, but dammit, if I can do eighteen hours a day, you can do fifteen. We didn't come to Germany to go shopping at the PX or the commissary, so I think we can just skip that little ceremony this afternoon. Inasmuch as we don't have chairs, desks, or phones, I'll expect everyone of you to go to the air bases we will operate from and start learning this business. As soon as you have a desk and a chair and a telephone, I expect you right back here, working." The speech really wasn't necessary for these dedicated, high-quality men. But I thought I should set the record straight for the future.

And so we all went out to take a look at the Airlift. My first over-all impression was that the situation was just what I had anticipated—a real cowboy operation. Few people knew what they would be doing the next day. Neither flight crews nor ground crews knew how long they'd be there, or the schedules they were working. Everything was temporary. I went out to the Wiesbaden air base, looked around, then hopped a plane to Berlin. Confusion everywhere. Planes had been scraped up from all over Europe. Some of the C-47's still bore the three stripes painted on for the Normandy invasion four years before. The C-54's were coming in—a squadron had come over with me the day before—but the old

C-47's were still in the majority. Although it was obvious that we needed more planes, it was also obvious that there would be a limit to the number we would have air space for in the corridors, ground space for in the operating bases in West Germany. We were going to have to shoot for a high utilization rate for each plane, rather than a large number of planes themselves. This would be the headache of my maintenance men.

My flight to Berlin took an hour and a half; the American corridor was the longest of the three. Beneath us the countryside was green, rolling farmland. There were no isolated farmhouses, however, as in America, but rather clusters of houses, from which the farmers went out to work the outlying fields, returning to the companionship of the community when the day's work was done.

A spur of the Harz Mountains extended across our line of flight. Though just a pretty green foothill compared to the Himalayas, it nevertheless required us to climb to an altitude of five thousand feet. Coming back later that day through the central corridor, restricted to one-way traffic out of Berlin, I saw that the terrain beneath was perfectly low and flat all the way, and the distance shorter. The corridor to the north was also short, I was told, and also over flat country all the way.

Flying the circuitous route to Berlin I could see that Red Forman, my chief of operations, was going to have plenty of headaches. Back on the Hump, we had thirteen bases in India feeding planes into six bases in China, practically all of Southeast Asia to maneuver in, and little interference from the enemy. But here in Berlin all planes had to land at two airfields, Tempelhof in the American sector, and Gatow in the British. They were only four minutes apart by air, and they lay in the midst of a checkerboard of Soviet fields. A Soviet fighter base, for example, lay smack in the mouth of the northeastern corridor, and the British had to veer sharply around it in order to avoid collision with Russian planes operating from that field. American traffic, going into Tempelhof from the south, passed within four miles of another Soviet field. In case a plane couldn't land immediately at either airdrome, it had only a twenty-mile circle to maneuver in, and that directly above the two fields. Although incoming and outgoing planes were given specific altitudes, I was told on that very first day of too many near collisions.

By nine o'clock that night all my staff members were back, full of observations and suggestions, and without further ado, I called a staff

conference. Beginning the day at nine o'clock at night did not seem unusual under the circumstances. Looking at the brief report of that first meeting, I see a list of twelve proposals considered of sufficient importance to look into immediately.

The first, of course, had to do with maintenance. We were all agreed that owing to the peculiar circumstances, we had to squeeze our utilization rate per plane to the utmost. Jules Prevost reported that the current maintenance schedule was impossible. Airplanes require constant maintenance, and they also require periodic maintenance at every twenty-five hours of flight up to two hundred hours, when they undergo a major inspection. At one thousand hours, a comprehensive overhaul must be performed. Maintenance sections of the groups and squadrons brought in had been crowded into existing facilities in the first place, given the responsibility for both routine maintenance and the major two hundred-hour checks in the second. There was a serious shortage of tools and spare parts in the theater, and it was just not possible to do everything at the same time. We knew that the Air Force had maintained a major maintenance depot at Burtonwood in England during the war, and if it would be possible to get this depot going again, we would have our two-hundred-hour inspections performed there. In the meantime, perhaps it would be possible to have them done at a maintenance facility at Oberpfaffenhofen (referred to as "Oberhuffin' puffin' "), near Munich. As for the one-thousand-hour inspections, they could well be performed in in the United States.

Also in the maintenance field, we agreed at that first conference to look into the possibility of making a more equal division of maintenance personnel between squadrons; many were seriously undermanned. We determined to look into the possibility of making three-to-five round trips per airplane before maintenance.

It was obvious that improvements must be made at Tempelhof Airport, the major airport in Berlin. The huge operations and administration building, built in 1935, was fantastic, with several stories underground. During the war a whole Messerschmidt factory had been housed there, in addition to a big, well-equipped hospital. Planes could taxi right under the building to discarge both cargo and passengers under shelter.

Though this huge edifice had obviously been designed by architects who were the greatest, the field itself had been designed by engineers

who were the worst. As Kenny Swallwell pointed out, the runways dated back to the horse-and-buggy days of aviation. Made of sod, they wouldn't be able to stand up under normal C-47 usage, much less the pounding we were going to give them with the big Skymasters. The one runway in use consisted of steel landing mats laid on a base of rubble. This had already begun to go to pieces, and an ingenious but wild method of maintenance had been devised. A force of a couple of hundred men equipped with new landing mats, sand, and asphalt, lined the runways. As soon as a plane roared by, they'd jump out and make what repairs they could, jump back out of the way when the next plane came by.

"We've got to have two additional runways there," Swallwell said flatly. "We need another to handle the additional traffic I know damn' well from past experience you're going to have, and we need a third to be used when we close down either of the others for repair."

Use of the Gatow Airport in co-operation with the British led to another line of thought. We had all noted that the American corridor, from Wiesbaden and Rhine-Main into Tempelhof, was half again as long as the other two corridors. Simple arithmetic showed that we would be able to get a higher rate of utilization out of our planes by using the two shorter corridors, in one and out the other. The tonnage that required a one-and-a-half hour trip from Rhine-Main required only a one-hour trip from the RAF bases at Fassberg and Celle; thus two planes based at Fassberg could do the work of three based at Rhine-Main. As I have already noted, the two northern routes lay over low and level country. We could come in on the deck if we wanted to.

It would thus be decidedly to our advantage to use the two northern routes, both of which led to the British zone. But how would this fit in with the British operations? A high degree of co-operation would certainly be necessary. Would it be possible to place all the planes flying the Berlin Airlift under one command? This was another point to explore.

On my trip to Berlin I had strolled around at Tempelhof, observing the planes being unloaded, the pilots checking in with Operations, and things in general. There was a lot of milling around. In the Operations room I'd seen a dozen pilots and copilots crowding around the Operations desk, waiting for clearance. From there I'd followed the crowd into an adjoining room, a kind of snack bar. Here more crew members were drinking coffee, munching on doughnuts, smoking, talking, and laughing.

I'd seen a couple of planes being unloaded swiftly and efficiently by sweat-drenched German civilians, and I knew that that phase of the turn-around activity was being well taken care of. The Germans were personally involved; they had their own well-being and freedom at stake, and they were working like beavers. But the way the crews were lounging around in the Operations room and the snack bar, I wondered how in the world they'd get their planes off on time. Well, a look at the records showed they were not getting off on time. There were frequent delays. The schedule was ragged.

There was a good, clear-cut solution to this problem: On the thirty-first of July, the third day on the job, I put out an order to the effect that no crew member would leave the site of his airplane at Tempelhof and Gatow. The order created no end of consternation and griping when it first came out, but the bellyaching diminished quickly with each crew's first trip to Berlin. For in the meantime we had made hasty preparations. Even as an incoming pilot was cutting off his engines after taxiing to the unloading ramp, a big truck with an unloading crew aboard was backing up to the cargo door to transfer the load. As the pilot got down from the plane, an Operations officer roared up in a jeep and handed him his clearance slip. If there was anything at all the pilot should know—an accident at the other end of the corridor, for example—the Operations officer passed along this information with the clearance slip. Then the weather officer came up in his jeep, to give the pilot the latest word in that department. But the *pièce de résistance* was yet to come. The third jeep to arrive was fitted out like a snack bar, liberally stocked with such items as hot coffee, hot dogs and doughnuts, and equipped with a canopy that could be extended in case of rain.

That wasn't all. We had approached the German Red Cross and asked for their co-operation, and we certainly did receive it. They had picked out some of the most beautiful girls in Berlin to ride along in the mobile snack bar and dish out the goodies along with enticing smiles. There were no more moans from the crews about staying by the plane. You couldn't chase them away.

The system clicked efficiently from the very first. Thanks to it, the second the plane was unloaded, the pilot was in his seat, ready to go. And the turn-around time came down to thirty minutes flat.

But of course it was first necessary to get the plane from the air base

in West Germany to Berlin, so let us begin at the beginning. The average person unfamiliar with air traffic would probably assume that a plane would take off from Rhine-Main air base, say, proceed to the beacon at Fulda, which marked the entrance to the corridor, then fly up the corridor to Tempelhof, circle, and land. Actually our procedures were far more complicated than that.

On that Black Friday I was taught forcefully that weather in northern Europe could be fickle indeed. The sun could be shining brightly at one terminal while it was raining heavily at the other, or it could be clear at both ends of the line but bad in the middle, particularly over the Harz Mountains near Fulda. What we needed on this run was one standard and constant set of flight rules to govern all planes at all times. The choice between visual flight rules and instrument flight rules was not a difficult one to make: You can fly by instruments in clear weather, but you sure can't fly by visual rules in the North German fog. I thus decided that all planes under my command would fly a never-changing flight pattern by instrument rules at all times, good weather or bad, night or day.

Another new rule I put in was more unconventional, to say the least. It caused a great deal of comment, particularly among air-traffic experts who had never heard of such a thing before. Frankly, I thought of it on the spur of the moment, while circling over Berlin, worrying about the increasing pile-up of incoming planes. It was simply this: If a pilot should happen to miss his landing for any reason whatsoever, he would continue straight out on course and return the two hundred to four hundred miles to his home base.

These two rules were included in the instructions I gave Stu Bettinger and Red Forman on Black Friday. They would comprise the nucleus for the new procedures I expected my two experts to come up with. Instructions given, I hitched a ride on another plane going back to Wiesbaden that night, leaving Forman and Bettinger to wrestle with the problem.

The procedures they worked out were as uncomplicated as was possible under the circumstances. Let's take a plane from the Wiesbaden air base, which is farther from Berlin than the other American base, Rhine-Main. There were normally about three times as many planes based at Rhine-Main, so it was given the master control of traffic from the two bases. There was only one corridor available to us from the

American Zone, remember. Thus planes were dispatched at regular intervals from Rhine-Main as a matter of course. When Wiesbaden had a plane ready to go, it would contact the master control and be given priority for take-off.

Just prior to take-off, the pilot was given the numbers of the three planes ahead of him and the two which would take off after him. He took off at a specific second—the exact time was given frequently for synchronization—and proceeded to follow a climbing, circuitous route over radio beacons placed for that specific purpose. Not only were two air bases feeding planes into the southern corridor, but planes were returning to both of these bases along separate flight plans from the central corridor. The path had to be exact.

At the exact moment the pilot crossed the Fulda range station at the entrance to the corridor, he broadcast in the clear the number of his plane. This was extremely important. Pilots of the planes ahead and behind him could thus check their watches and tell exactly the intervals between planes. From there on it was a straight flight up the corridor, chugging along at 170 miles per hour. (Though the normal cruising speed of the C-54 is 200 miles per hour, we held it down on the Berlin Airlift to first 180 miles per hour, then 170, because of the heavy loads we carried.) Over Berlin the pilot turned left at a beacon a few miles on the right side of Tempelhof, proceeded directly across the airport at right angles to the runway, and started making his descent. He made three right turns, flying a box flight pattern, simultaneously lowering down to fifteen hundred feet. He would now be lined up with the runway and would come in at 120 miles per hour, lowering slowly until he was at four hundred feet. If the ceiling was over four hundred feet and visibility a mile or better, he would come in. If the ceiling was less than four hundred feet, visibility less than a mile, he would simply shove forward his throttles, breathe a sigh of regret at missing the hot coffee and doughnuts and pretty girls in the Red Cross truck, and proceed for home base. I stated publicly that I would reduce to copilot status any pilot who failed to land with ceiling and visibility *greater* than four hundred feet and a mile, and that I would court-martial any pilot who did land with ceiling and visibility *less* than four hundred feet and one mile. I never did court-martial any pilot or reduce anyone to copilot status on these counts—I never had any intention of doing so in the first place

—but the message got across. Sometimes, I'm sure, this failure to land must have been a little embarrassing, particularly when the pilot's home base had become socked in and he had to fly on to an alternate base, landing at Vienna, say, or even Marseille on the sunny Mediterranean, with a load of coal for Berlin.

Later the limits at Gatow were reduced to a two-hundred-foot ceiling and one-half mile visibility, but remained the same at Tempelhof due to the short runways and high apartment houses on the approach to the field. A landing at Tempelhof was always something to contend with.

There were many additional and intricate features in the exact route procedures worked out by the Bettinger-Forman team. Speeds of climb had to be carefully determined, for example, as well as speeds of cruise and descent. We found it necessary to pace each aircraft with a fighter plane equipped with specially calibrated instruments in order to check the air-speed indicator. In the beginning we flew our aircraft at five different altitudes, at intervals of five hundred feet, from five thousand to seven thousand feet, in order to keep them adequately separated. As we grew more confident about our timing, the number of altitudes was reduced to three and finally to two.

From the very beginning we operated on a three-minute interval between take-offs. Even though we did not have enough planes on hand to maintain a round-the-clock schedule of three-minute take-offs, I nevertheless insisted upon scheduling them for periods of several hours at a time. Thus, should we ever have the equipment and the personnel to operate on that schedule around the clock, we'd be prepared for it.

Why the emphasis on three minutes? Because it provided an ideal cadence of operations with the control equipment available at that time. There are 1,440 minutes in a day. At three-minute intervals, this meant 480 landings at, say, Tempelhof, in a twenty-four-hour period. The planes that came in had to go out again, of course, and with the take-off interval also set at three minutes, this meant that a plane either landed or took off every 90 seconds. There was little time wasted sitting at the ends of the runways.

It is this beat, this precise rhythmical cadence, which determines the success of an airlift. This steady rhythm, constant as the jungle drums, became the trade-mark of the Berlin Airlift, or any airlift I have operated. I don't have much of a natural sense of rhythm, incidentally; I'm cer-

tainly no threat to Fred Astaire, and a drumstick to me is something that grows on a chicken. But when it comes to airlifts, I want rhythm.

And regimentation. I insisted on complete regimentation in every aspect of flying for every pilot, copilot, and radio operator. There was only one best technique for each flying maneuver—take-off, climb out, cruise, descent, and landing. No variations. I wanted no experimenting on anyone's part.

The complete operating procedure on the Berlin Airlift, particularly the two drastic innovations of flying continuously on instrument flight rules and of returning to base after one pass at the field, caused much excited interest in both civilian and military aviation circles. The Civil Aeronautics Authority sent a team to investigate our procedures, and Bettinger spent several days demonstrating and explaining them. Some years later, when General James Doolittle was named head of a committee to investigate the whole problem of air traffic following the crash of a plane in the residential district of Elizabeth, New Jersey, Bettinger testified before the committee at some length. Many of us believe that both of these innovations born on the Berlin Airlift have a definite place in air transport today, both civilian and military.

After this new system had been in effect for several days, long enough for the pilots to become familiar with it, I set about getting their reactions. I didn't want to get this information from squadron commanders or group commanders, men who might conceivably be influenced by what they thought I would wish to hear, but directly from the lips of the men who were flying the route themselves, day in, day out. So I took over the meeting room in the Schwartzer Bock Hotel and arranged to have a keg of good German beer and some cold cuts on hand. I sent out invitations to a group of about thirty pilots to come share the beer with me and some of my operating staff. After a stein or two, I threw out a question, and there was no hesitancy in answering it—everybody started talking at once.

"O.K.," I said, "let's begin at the beginning and take it up from warm-up to take-off and then beacon by beacon."

The big gripe dealt primarily with flight procedures, and specifically with the number and location of beacons. When passing over a beacon in the climb out and making the sharp turn required, the pilots had the uncomfortable feeling that another plane might climb up their backs or

turn into them on a bend in the course. More beacons were needed. Too, they insisted, climbing speeds for all pilots had to be rigidly enforced by Operations, and flying-safety lectures continuously given to all crews as well as more frequent check flights for all crews to insure standardization. What they said made sense, and I looked over at Pete Fernandez, our communications officer, to make sure he was taking it all in. He was taking it all down. Pete had the new beacons the pilots demanded in place in forty-eight hours. This was a job that would usually take months, but Pete was a fantastic operator.

There were other complaints about living conditions—food, mess halls, crowded barracks. People were constantly coming and going all the time, the pilots said, making it hard to sleep even when dead-tired. The bull session went on for hours, from 10 A.M. until after seven that night. Finally a young lieutenant made what many considered the most intelligent suggestion of the day. "How about getting the Red Cross or somebody to send over a couple of hundred beautiful American girls?"

"We don't have enough housing as it is," Kenny Swallwell, my engineering officer, said seriously. "Where would they sleep?"

They all answered at once, and that was the end of the meeting. It served its purpose well. In addition to making the operational changes, we set about immediately doing all we could to improve living conditions. This was not easy. The Berlin Airlift was not like the Hump, which grew gradually. Here we had a great mass of planes, crews, personnel of all kinds, pulling in suddenly from all over. Nor did we have our own housing. We were a task force with one job to do; the occupation forces were supposed to supply us all our needs. But we did get them to requisition some private buildings in both Frankfurt and Wiesbaden for Operation Vittles personnel. The barracks being used by the occupation troops were already full except for the unfinished attics, which were bare beams supporting the ceilings below. We had them floored over and thus at least got some attic room. But despite the requisitioned buildings and remodeled attics most of my men had to resign themselves to living in tents or in hastily constructed quonset huts for several months. I passed the word down to housing officers to do their very best to put crews working on the same schedules together, so that they could all sleep at the same time. I put pressure on the mess officers to improve the food.

I made constant rounds. I was available to everyone—dozens of times

I've heard my name called by some fresh-faced lieutenant and waited for him as he came panting up to give me information, make a complaint, or ask advice. I think one young man intended to give me a good chewing out, but I talked my way out of it. He charged up to me at Tempelhof.

"General," he demanded, "do you know what was in that plane I just flew into Berlin? Wine, that's what. Wine for these Frenchmen. Do you realize that I risked my life to bring in a planeload of *wine?*"

He made it sound like arsenic. I explained to him gently and in some detail, because I felt his concern deserved an adequate explanation, that to the French wine was an essential part of the meal. And anyway, I went on, these allotments were handed down to us by higher authority, and we should be good soldiers and carry them out without complaining. The combination answer seemed to satisfy him.

Making myself available to the pilots and crew members, seeking them out and listening to their complaints, gave me an insight into the true operations of the lift that I could never have gotten sitting at my desk reading filtered and secondhand reports. Frequently I learned of an accident before the commander of the base on which it had occurred. The opportunity to report to him what was going on at his own base was extremely valuable, especially when I dragged him out of bed to do so. It tended to shake him up and keep him on his toes.

For my meanderings were by no means restricted to the daytime. I would purposely pick late at night or the very early morning hours to check up on what I considered important or vital activities. It wasn't unusual for a sleepy tower operator to suddenly realize that I was standing there with him. Sometimes there would be no conversation other than a greeting or a good night; there wasn't much need for words when things were going properly. The word got around that the General had been there during the small hours. It was a twenty-four-hour operation every day, and I wanted everyone in the Airlift to remember that. The men I talked with knew, too, that I was still a long way from my bed.

Sometimes, after my flight jacket picked up some coal dust and the stars on my shoulders were not so readily distinguishable, I'd be practically incognito, just another GI in Germany. Reporters loved to pick up little items such as the time a pilot who was giving me a lift into Berlin shouted at me to shake a leg and get a move on. I didn't mind

a bit, for I learned a lot about my command from pilots who thought they were talking to just another airplane driver.

And sometimes my conversations with pilots out in the field brought strange twists. On one occasion in Berlin, late at night, I strolled out to the ramp to have a cup of coffee with the pilot of a C-54 just coming in with a load of coal. He was tired and dirty and looked more like a coal miner than an Air Force pilot. He was, he said, completing his 210th trip; he'd delivered over two thousand tons of coal. No wonder he looked tired. But as he drank his coffee, he seemed to relax, and he looked at me and smiled.

"You know, General," he said, "there's one thing we can be thankful for in hauling all this coal to Berlin."

"Yes?" I said. "What's that?"

"At least we don't have to haul out the ashes."

For the first weeks, even months, of the Airlift, the recognition of its importance kept the men going. But eventually the first great burst of enthusiasm began to fade. We were settling down for the long haul, and resentment was beginning to set in. At the start the Airlift had been considered no more than a delaying action, to continue only a few weeks. Personnel, both individuals and whole units, had been assigned to USAFE for ninety days, even in some cases thirty days, temporary duty. Units had come in from Texas, from Panama, from Alaska. The squadron of C-54's from Anchorage had bright-red markings so they could be easily distinguished if forced down in the snow. The night before their take-off from Alaska they had been having a squadron party, an annual organization-day affair, with the Berlin Airlift far away in another world and hardly a thought of it in anyone's mind, when the Officer of the Day burst into the festivities, shaking a radiogram as though it were a hot potato, and handed it to the commander. It came from Washington, and it said that the squadron would leave Anchorage in the morning for Berlin Airlift duty—no prior warning. The party ended, and husbands and wives hurried home to pack—the husbands for the flight to Berlin, the wives and children for the trip back home to mother.

One troop-carrying group had just arrived at its new station at Hickam Field, Hawaii, when the order came through to proceed immediately to Germany. At that moment the wives and children were on board ship

proceeding to Hawaii from San Francisco. The next day they looked up and saw the entire group flying over their heads, en route back to the United States and Germany. It was three days before the wives arrived in Honolulu, the place their husbands had left. No one could tell them how long the group would be in Germany, or even if it was coming back to Hawaii.

Similar situations existed at all the other bases from which units had been transferred. Even to military personnel and their dependents, used to uncertainty, this situation was extreme, and it got worse. In the cases of practically every man, the TDY was extended another thirty days, and another, and another. To some wives and sweethearts this was the bitter end, for the "Dear John" letters began to arrive.

As I got around, visiting all the bases, flying in and out of Berlin regularly, I heard the complaints and bellyaching from all my people, both flight crews and ground personnel. What they wanted most I could not give them, for I was on TDY myself and had no idea when it would end. All I could do was to keep hammering away on higher headquarters to provide all the necessities and comforts of military life that were possible. Some of my base commanders thought I was going a little far when I proposed curtains for barracks windows, but I insisted. We were flying day and night. If a pilot had flown three round trips to Berlin the night before and was going to fly three more the next night, he deserved something to keep the sun out of his eyes.

The situation cried out more and more for a newspaper, both to give a little lift in morale and to keep the men apprised of what was going on. We'd discussed it on the way over. I wanted to get that same feeling of competition that we had had back on the Hump. Just as on the Hump we rarely saw a Japanese, so, in Germany, we rarely saw a Russian. We had no enemy to keep us on our toes, and although the men knew that the cargo we were flying into Berlin kept the city alive, it was hard to keep this fact constantly uppermost in everyone's mind, particularly if he never got within a hundred miles of Berlin. The solution was to set up competition between the units flying the lift. Give Americans good healthy competition and they can accomplish just about anything. One way to do this was to set up a daily quota for each unit, announce it in advance, then report at the end of the twenty-four-hour period how each unit had done in comparison with all the others. One way of getting

the quota to the men was by posting it on the howgozit boards; another was to announce it each day in the daily newspaper. And so was born the *Task Force Times,* Bill Thompson, editor.

Thompson and his staff had complete editorial freedom. His one standing order was to leave my name out of the paper. This was to be no puff sheet for the commander, but a sprightly, newsy paper that would enjoy the widest possible readership. We were lucky in finding a crackerjack cartoonist, Technical Sergeant John Schuffert, who had an extraordinary knack in giving his readers just what they wanted to see. His cartoons were raw and bitter and played up everything disagreeable on the Airlift, but they brought a smile to their readers' faces, and they added greatly to the popularity of the *Task Force Times.* Schuffert had carte blanche; I was the only person who could censor him, and I did only on a couple of occasions when the latrine-type humor he liked was a little too raw. He particularly loved to pick on one of my base commanders. After one especially deflating cartoon the base commander went to the foolish extreme of banning the paper from the base. I countermanded the order. Schuffert drove USAFE headquarters crazy. I was constantly fighting for him.

Another battle which I fought all the way to the top was over the open publication of tonnage entering Berlin. Security officers wanted the figures kept secret; I not only wanted them unclassified, I wanted to publicize them, shout them from the housetops. I had many reasons. One was that we couldn't keep the figures secret in the first place. A heavily loaded four-engine plane is not something you can smuggle into a city. We knew that the Soviets had agents stationed at vantage points overlooking the fields. They could both hear and observe the planes come in. We were under close scrutiny at all times.

If the Berlin Airlift was to be successful—and I never had any doubts but that it would be—then it would be more than just an airlift. It would be a propaganda weapon held up before the whole world. We should not hide it. And finally, knowing my men, I wanted to be able to give them the exact tonnage figures of each squadron to inspire them to do better. Why, this was one of my tools. Total tonnage figures for the past twenty-four-hour period came out at noon each day. These figures would be rushed into print and the paper sent on its way. Distribution was easy; all planes went into Berlin, and all planes returned to their bases. The

papers were put on the first available plane out of Wiesbaden base, and picked up in Berlin by the first planes leaving for the other bases.

The chief topic of conversation on every base was the daily tonnage records. Visitors to the Airlift were amazed by the spirit of competition. Richard Malkin, editor of *Air Transportation,* told of entering the Operations room at an air base to hear an officer shouting angrily into the phone.

> "What's he yelling about?" I asked the sergeant at my elbow.
> "Figures," he replied wearily. "Everybody's tonnage-whacky. He's claiming the tonnage high for the day. Somebody in Wiesbaden gave it to the 313th or some other group. You'd think this was the Kentucky Derby."

But the louder the personnel screamed over the constant competition, the better I liked it. The intense rivalry even spread to the loading and unloading gangs, composed of displaced persons from the Baltic countries and German civilians. We encouraged enthusiasm with prizes—usually cigarettes, worth their weight in gold—for outstanding performances. One twelve-man German loading crew stowed away twenty thousand pounds of coal in five minutes and forty-five seconds, and were rewarded with a whole pack of cigarettes per man—a fortune!

When I arrived in Germany, the hard-and-fast regulations against fraternization made it difficult to use Germans except in the most menial capacity. As our maintenance problems multiplied, however, we began to consider more and more seriously the possibility of using German mechanics. These problems were serious to begin with, but as our increased efficiency brought about a higher utilization rate of planes, additional maintenance was required. Gradually, on the American side of the Airlift, we were replacing the C-47's with the bigger C-54's. It is an even greater testimonial to the sturdy Skymaster to point out that it was never intended as a cargo carrier in the first place. It was originally designed, fifteen years before, as a passenger airliner for long-distance runs. On the Airlift we were using it for a purpose exactly opposite that for which it was planned—transporting heavy cargo short distances. Loading the plane to its maximum, often overloading it, meant that the engines had to work harder to reach altitude. The greater proportions of take-offs and landings, in relation to flying time, placed a

heavier strain on its landing gear, and wore out tires and brakes. Eighty per cent of the total tonnage taken into Berlin was coal, and though we constantly improved packaging, going from GI duffel bags to bags made of several thicknesses of paper, the gritty, abrasive particles of coal dust still managed to creep into every portion of the plane.

Under such conditions, there was no wonder that we quickly exhausted the theater supply of replacement parts. The supply of windshield wipers, estimated to be enough to last for six months, went in two weeks. On the day I took over, I found a desperate shortage of tires; replacements had to be rushed by air from the United States. The shortage of engines became so acute that we actually foresaw curtailing operations, but then several hundred of an earlier model were discovered in depots in the United States. The older engines produced less horsepower, which gave the pilot something to think about when he had both models on one plane, but they served the purpose.

But of all our shortages, that of trained man power was perhaps the most acute. All our units were under strength. In addition, the shortage of adequate equipment, from heavy cranes on down to such basic items as screw drivers, curtailed the work output per man.

The idea of augmenting our maintenance forces with German mechanics followed naturally. For years the world had heard about the great *Luftwaffe;* surely the German Air Force had had mechanics. Now we needed them to help us help their fellow citizens in Berlin.

The first stumbling block was the nonfraternization regulation; we could knock ourselves out feeding the Germans, but we couldn't see them socially or employ them in any but menial capacities. Permission to use Germans as aircraft technicians could come only from General Clay himself. This presented an interesting problem, for not only could I not talk to the Germans, I couldn't talk to my fellow American, General Clay. When I had first arrived in Germany, I had requested permission from General LeMay to present my respects to General Clay, and permission had been granted for this one occasion. In my letter of instruction from General LeMay, it was specifically pointed out whom I could "co-ordinate with," a military phrase meaning "talk to," and General Clay was one of those omitted. My organization was in close contact with his on an around-the-clock basis, of course, and my people could talk to his people. But I could not talk to him—offi-

cially. My channel was to USAFE, where my "Hump" ideas were not always understood. Fortunately, one day when I was routinely checking turn-around problems at Tempelhof, General Clay came to the airdrome to take off on one of his frequent visits to the free zone. He saw me, came over, and asked, "Any problems, Tunner?"

I told him I certainly did have a problem—there weren't enough good maintenance men to go around. "But I think I can whip it," I said, "if you will allow me to hire some skilled German mechanics."

"Go ahead and do it," he said. "Tell Curt I said it's O.K."

That was all I needed. I reported the conversation to the USAFE personnel department, which could hardly fail to approve the plan, and then turned the matter over to my own personnel people. I suggested they find a former German Air Force maintenance officer who would, in turn, be able to locate mechanics for us. They came up with a Major General, no less—Major General Hans Detlev von Rohden. He had served in air transport during the war and was fully conversant with our problems, as well as with the English language. I told him what I wanted, and he delivered. Almost overnight excellent German mechanics began flowing in. Now we had only two problems to overcome: the language barrier, and the unfamiliarity on the part of the Germans with our big C-54's. Von Rohden organized a translation section to put our training manuals into German as the first step in an extensive training program. In the meantime, we assigned maintenance personnel who could speak German to serve as supervisors. As German civilians acquired experience, those who could speak English were able to step into key positions, thus reducing the load on the German-speaking maintenance officers. The German mechanics proved to be so capable that eventually eighty-five of them were assigned to each squadron. We had more German mechanics than American!

In the preliminary discussions with von Rohden, we naturally discussed the most-publicized German airlift, the attempt to supply the German Army cut off by the Russians at Stalingrad. Von Rohden, who had been there, said that General von Paulus, commander of the German Army at Stalingrad, had flown to Berlin at Hitler's command and attended a large conference at which Marshal Hermann Goering was also present. Goering assured Hitler and von Paulus that his Air Force would solve the logistics problem by airlifting daily three hundred tons

of cargo required for the encircled German troops. However, even that modest figure was never attained at Stalingrad. Why not? Curious, I questioned von Rohden in detail, and I believe that I have an answer why the Stalingrad airlift failed. It was not through lack of equipment, but rather because there was too much of it. Between four hundred and five hundred planes were brought in to handle the job, too many for the size of the mission. They crowded the fields and confused the meager maintenance facilities. Many of the planes were flown in from the desert campaign in North Africa. They were not winterized, and the oil and hydraulic fluids congealed, making struts and other mechanisms inoperable and compounding the mechanical problems. Many of the crews brought up from Africa, von Rohden said, had nothing to wear but summer clothes there in the Russian winter.

Even more transport aircraft had then been hastily summoned from Norway and France and other bases. But the combination of lack of know-how, lack of maintenance facilities, and inadequate winterization of too many planes was too much. It was this, rather than Russian action, which hampered the airlift operations. Three hundred planes were lost, and only a scant ninety tons a day delivered, when the comparatively small total of three hundred tons was required and had been promised. And thus the Russians were able to kill or capture von Paulus' army of 290,000 men. History will look at Stalingrad as one of the decisive battles of the ages. An airlift had failed.

Perhaps the failure of the German airlift at Stalingrad was one of the factors in the early Russian reaction to the American-British Airlift into Berlin. The Russians had never had an airlift themselves, and they didn't take ours seriously until it was too late. I have another personal opinion on this. The Russians did not understand instrument flying themselves and therefore did not believe that we could maintain the Airlift during the long European winter. Frequently a cloud cover extending from five hundred feet on up to five thousand feet would cover the entire region. A whole procession of American planes would be flying along in bright sunlight above the clouds, but never once on such days did I see a Russian plane up there with us. The Russians were good pilots, capable of all kinds of stunts, and they flew in the lousiest weather conceivable—but always beneath the clouds, never on instruments. I am convinced that the Russian unfamiliarity with instrument

flying led them to take our airlift too lightly at the beginning. They did not think we could do it.

Later, after it was apparent that the Airlift was effective, the Russians resorted to many silly and childish stunts in their efforts to harass us. Their first action was to announce that on the morrow they would be flying in formation over Berlin and East Germany, including the corridors. I protested through channels, as well as to the Four-Power Air Safety Center in Berlin, but I was convinced all along that the Russians were bluffing. I put out orders to all pilots to continue boring ahead and not to pay any attention to the Russians if they did show up. The threatened formation never developed.

As time went on, the Russians harassed us in other ways. On occasion they staged anti-aircraft practice, with a plane towing a target for the guns below to shoot at. Sometimes the shells burst in the corridor. They were seen by the pilots and were sometimes close, but they were never more than a morale threat. On some occasions, as our planes lumbered up the corridor, a Russian jet would zoom out of nowhere towing a sleeve target, with another fighter zipping along pouring machine-gun bullets into it. Sometimes Russian pilots buzzed us as we proceeded up the corridors. It's a helpless feeling when, as you're grinding along in a cargo plane, a MIG suddenly screams down out of nowhere to miss you by a few feet, but there was nothing we could do but sit there and feel helpless. All I could do was to repeat my instructions to all pilots to fly on. They did, and it finally reached the point where we were all able to laugh at these attempts to intimidate us.

The Russians performed particularly childish tricks at the Gatow field, where the Russian Zone comes right up to the end of the runway. One night they moved powerful searchlights into position and began flashing them into the eyes of pilots taking off. Take-offs continued, and no damage was done, but it was extremely annoying. Of far greater concern to us was the rumor passed on through German civilians of plans to secrete time bombs in the sacks of coal. Fortunately none ever were.

Of all Communist hostile acts, perhaps the most damaging was their poison-pen campaign. Mysterious letters would come to our pilots, letters mailed both in Germany and in the United States, reporting the

infidelity of wives or sweethearts. Some degree of bitterness already existed between many couples over the extended periods of temporary duty, and even to those husbands who normally shared a firm mutual trust with their wives the letters could cause nagging doubts and a resulting drop in morale.

Far more successful than the Russians in hamstringing the Berlin Airlift were the same old bugaboos I had experienced in India—divided command for one, and conflict between senior officers dedicated to the technical and strategic functions of the Air Force and those of us who had built up some *expertise* in air transport.

Early in the Airlift it had become obvious that it would function much more smoothly and efficiently if the British and American operations were combined. There were several good reasons for this. Consolidation of scheduled flights into and out of Berlin would certainly be safer and smoother than maintaining two separate operations side by side. As I have pointed out previously, bases in the British zone were geographically superior to ours. Two planes based at Fassberg, for example, could do the work of three based at Wiesbaden. Our study of climatology in Germany over the past fifty years clearly indicated better weather in the north. Further, between the British bases and Berlin the country was as flat as a football field; from American bases we had to cross over mountains.

The increased utilization of the two northern corridors simply made sense. I had first sent a group of C-54's to Fassberg in early August. As we based more and more Skymasters at these British bases, a combined operation should produce smoother administration. I proposed this to General LeMay, and he readily saw the advantages. He agreed to take up the matter with his British counterpart, Air Marshal Sir Arthur P. M. Saunders, commander in chief of the British Air Forces of Occupation (BAFO).

LeMay and I flew up to Sir Arthur's headquarters at Bückeburg to propose setting up the combined operation. Saunders agreed immediately in principle, but a difference of opinion soon developed over the extent of the integration of the two forces. The USAFE position was that American and British forces be combined in one task force, with one headquarters and one commander, who would have complete control over the entire operation. The BAFO position was that a co-

ordinating committee should be created and all questions of traffic control be referred to this committee for action. The British were well aware that, should one commander be named to command an entire operation, that commander would be an American. America was making eighty per cent of the contribution, and it was only common sense that an American should head it up. LeMay and I could understand the British opposition, but we saw little point in trying to run the Airlift through a co-ordinating committee.

We held conference after conference. Sir Arthur, erudite and urbane, spoke eloquently and at length on the British position, offering alternate proposals and well-thought-out compromises. LeMay just sat there, puffing on his cigar and not giving an inch. He had made up his mind what he wanted before the conferences even began, and he was adamant from beginning to end. Saunders might as well have been talking to his cigar. The final agreement was reached on October 14, one day before LeMay was to leave Europe to become commander of the Strategic Air Command. He and Sir Arthur signed a lengthy directive setting up the Combined Airlift Task Force (CALTF). The nub of the directive was given in paragraph 2, which read as follows:

> 2. The purpose of this organization is to merge the heretofore coordinated, but independent, USAF-RAF airlift efforts in order that the resources of each participating service may be utilized in the most advantageous manner. Its primary mission is to deliver to Berlin, in a safe and efficient manner, the maximum tonnage possible, consistent with combined resources of equipment and personnel available.

In addition to merging American and British Airlift efforts, this paragraph brought about a new and important change in the over-all concept. Heretofore the Airlift had been assigned a minimum amount of cargo. From now on, we were to get all the tonnage we could into the blockaded city. The sky was the limit. This would change the emphasis from utilization of planes to tonnage, from a daily quota to unlimited quotas. Thus, when there was unforseen congestion in the corridors on the Berlin airfields and some part of the operation had to slow down, an American C-54, with its ten tons of cargo, took precedence over an RAF Dakota, with three tons.

Under the terms of the directive, I was designated commander of CALTF, with Air Commodore J. W. F. Merer of the RAF, a fine, dedicated officer, as deputy commander. Merer also continued in command of the RAF's operation Plane Fare.

At the same time the Air Ministry in London replaced Air Marshal Saunders with Air Marshal Williams, a big, florid, easygoing and most likable South African. I now had two bosses, one American and one British.

Setting up CALTF was one of LeMay's last actions as commander of USAFE. After three and a half months of responsibility for the LeMay Coal and Feed Service, he had reason to consider the merger a wise move. He also felt that in delegating both the responsibility and the headaches to Merer and me, both of whom had extensive experience in air transport, he was performing a valuable service for his successor, who did not.

As we parted on our return to Wiesbaden, the creation of CALTF now a *fait accompli,* I shook hands with LeMay and wished him Godspeed on his new mission.

"Thanks, Bill," he said in his terse way. "You're doing a good job anyway, but this agreement's going to help."

This was great praise coming from the taciturn LeMay. I was still basking in it the next day when I followed the time-honored Air Force custom of going out to the field to see the departing commander off. His successor, Lieutenant General John K. Cannon, was also in the party. We shook hands with LeMay as he boarded his plane, and then stepped back to witness the rest of the traditional ceremony of departure.

I had been looking forward eagerly to renewing my acquaintanceship with General Joe Cannon. My respect for him dated from my student days at Kelly Field, when he was the final check pilot for the fighter students. I never flew with him, as my training was in bombers, but I heard plenty about him from those who did. He was considered tough but fair, just like his counterpart, Clair Chennault. I did not think at all then, incidentally, of the coincidence in which I served in a similar capacity under those two men in the two most important missions of my career. If I had remembered my experiences with General Chennault, perhaps I would have proceeded a little more cautiously the morning of October 17, when I was scheduled for my first formal appointment with

Cannon to brief him on the operations of the Berlin Airlift. As it was, I was totally unprepared for the reception I received. For as I strode into his office, all bright-eyed and bushy-tailed and eager to talk about the Airlift, I was rocked back on my heels by a roar of rage.

"What the hell is this, Tunner?" he demanded, waving the directive creating the Combined Airlift Task Force. "What are you trying to do to me?"

I swallowed and made the best explanation I could, that these negotiations had been going on for some time, and that LeMay and I had hoped to complete them before he arrived to save him the lengthy and complicated involvement, and that we thought he would be pleased. I felt that my explanation pacified him somewhat, and we parted on fairly good terms. In fairness to Cannon, I may have been a little impatient with him. I was then forty-two, cocky and confident in my knowledge of air transport and the ability of my staff to carry out its duties, and I did not feel that I needed any advice from an aging combat man of fifty-six years. All I wanted was to be allowed to carry out my mission as I saw it should be done. I had been sent to Germany for this specific job by a very high authority. I needed help, his help, and his primary job as I saw it was to aid us logistically. I wanted to be left alone—I knew best how the job should be done.

The sparks from that first meeting never cooled. Our personal differences have no bearing here, and I will not air them. General Cannon, who has since died, was a highly respected pioneer in the Air Force, and rightly so. Our disagreement stemmed from the basic differences between combat people and transport people. These differences seriously affected many phases of the Airlift, and they should be related for the benefit of future air transport operations.

As the commander of a Task Force, I operated under the authority of a letter of instructions from the commander, USAFE. Under the terms of LeMay's letter, I was permitted to co-ordinate with my own people, the personnel of the Task Force, base commanders, and the like. I could not, as I have mentioned, co-ordinate with General Clay. I was not specifically authorized to co-ordinate with MATS and the Air Materiel Command, but, on the other hand, I was not forbidden to talk to these two organizations, and as it so happened, I was in frequent contact with both of them, with the complete awareness of LeMay. You may recall,

for example, that on Black Friday I visited the tower to get a look at the traffic control operators who had let things get so out of hand. It was soon apparent that the men on duty there lacked the experience necessary for them to cope with the density of traffic to be expected on the Berlin Airlift. It was vital that we have experienced men. I thus got on the transatlantic teletype direct to Larry Kuter immediately to request that several skilled operators be sent to Berlin. His personnel section tracked down twenty experienced reservists currently working for the Civil Aeronautics Authority at civilian airports in the United States, and in just four days after my direct request these men were in uniform and on the job in Germany. I had no reluctance whatsoever to make this kind of request of Larry Kuter, or his counterpart at the Air Materiel Command in supply or engineering matters, when the situation warranted it, and from the prompt response I always received it would be natural to conclude that they were glad to deliver.

My experience has always been that on the Air Staff and within the Service Commands of the Air Forces there exists a great mass of knowledge on every subject, and those responsible will do just about anything to get it to the man in the field who needs it. I have heard complaints about the slowness of getting supplies or engineering data or perhaps personnel. When one turns the stone to see why, it is usually because the request never gets in to the man who knows in time. Unfortunately, this became the case here, as I shall recount.

For my letter of instructions from General Cannon changed the situation immediately. From that day on I was specifically forbidden to co-ordinate with MATS, AMC, and just about everybody else. From then on all contact with other commands had to be made through USAFE headquarters. Instead of getting special personnel on the job in Germany four days after I requisitioned them, we'd have been lucky to get the requisition through USAFE headquarters itself in four days. It was particularly difficult when MATS was involved because Cannon seemed to dislike MATS and didn't want to have anything to do with it.

His attitude was not something new. The ATC had had a similar problem during World War II with a few of the older, tactically indoctrinated officers. One reason may have been that most of the talent in the wartime ATC was not professional in the military sense and was no doubt responsible for breaking some long-established rules and customs.

Of course, the ATC also did a tremendous flying job. At any rate, here on the Berlin Airlift I was not only officially told, but verbally reminded, that I would take no matter up with MATS. I felt at the time that such a traditional motivation had no place in a military operation of the scope of the Berlin Airlift.

Another of the big areas of conflict was in morale. The majority of personnel assigned to the Airlift were on temporary duty, which had been extended, extended, and extended again. The bloom was off the rose. Morale was understandably low. Everybody wanted to go home. If I had had the authority, I would surely have sent some of the extreme hardship cases back to the States, but I did not have that authority. I couldn't bring men in, and I couldn't send them out. Cannon, however, as commander of USAFE, could and did. He liked to be known as a good fellow. He always wore a big smile, and he liked to go around listening to the troubles of the GI's. If the story was good enough, he'd send the man home regardless of his duties, or how long he had been in Europe. Word of this got around, and the more members of the Task Force began to think of Uncle Joe Cannon as sympathetic and kind-hearted and fair, the more their commander, I, became by contrast harsh and cold and a miserable guy to work for. Not only that, but some of the people Cannon sent home were key men in the Airlift operation.

I use these personal experiences to show the inefficiency of the awkward setup under which the Airlift Task Force was operating. The Berlin Airlift was particularly frustrating in this regard in that the Airlift personnel lived and worked side by side with the occupation forces; their morale could not help but suffer by contrast. Before the Airlift, the occupation people had as soft a job as you could find in the military establishment, working a couple of hours a day and scrounging the rest. Suddenly they found the exciting and somewhat bewildering Airlift in their midst; it went on around the clock, and so did its personnel. However, in fairness, by the time the New Year rolled around, over six months later, the entire military establishment in Germany was operating at the accelerated tempo.

The housing provided for my personnel in Wiesbaden and Rhine-Main was grossly inadequate. Airlift men were crowded together in poor quarters. The occupation forces, who were on permanent duty and assigned to permanent establishments, lived like kings in contrast, and this

made the quarters of the Airlift personnel seem even more miserable. Transportation provided was also inadequate. I thought that if my staff could schedule four-engine planes so that they could get off the ground every three minutes, the least Cannon's staff could do was to provide reasonably punctual bus transportation for crew members from their quarters to the base. These matters were the responsibility of USAFE, but it was the Airlift which suffered.

My officers and I were, in effect, placing our military careers on the line. We were expected to deliver. We would have had a great deal more chance of running an efficient operation and fulfilling the mission had we had control of our personnel resources. An Airlift command, as a command in any other large and vital operation, should always have some control of replacements, promotions, awarding of medals, and selection of its key officers. It should have, if it is to last more than a few weeks, administrative and logistical control as well as operational control. To have operational control only over a long period of time will spell the doom of any vital, all-out enterprise, for subordinate commanders may, and do, look to the administrative boss for support or sympathy when the going gets tough. They can always complain, perhaps legitimately, "My troops are too tired to go on," or, "They don't have enough of the right food," or, "They don't have the supplies they need." As the operational man has no control over these matters, all he can do is bluster or complain to the administrator himself; actually he is powerless.

Even today I can see no reason for the personality conflict. I certainly showed no rancor; I was junior to General Cannon in both years and rank, and I paid to him the full military respect that I expected from my subordinates. I was told that he resented a younger man getting all the glory. Well, there was more than enough to go around. With more co-operation the Airlift could have been a greater success, and he could have had all the credit for it—just let me get the job done.

Another responsibility of USAFE was the maintenance depot at Burtonwood in England. Our original plan had been to shift the two-hundred-hour inspections from "Oberhuffin'puffin' " to Burtonwood with the advent of the harsh Bavarian winter. Jules Prevost and I had visited Burtonwood at the beginning and had been assured that we could count on seven two-hundred-hour inspections a day there, provided we could

increase the depot's personnel. To accomplish this I transferred maintenance men from the various squadrons flying the Airlift to Burtonwood. As the squadrons would no longer be responsible for the two-hundred-hour inspections, this reduction in personnel seemed justified. Maintenance operations were transferred to Burtonwood at about the time General Cannon took over command of USAFE. "Oberhuffin'-puffin' " had been under Airlift command, but Burtonwood was not. At first the new depot met its commitments in fine style, but then its output slackened off. Prevost and other maintenance officers flew over to Burtonwood repeatedly, as did I, and we all agreed on the various causes of trouble. The depot is just outside of Liverpool, and it was dingy, dirty, and depressing-looking. Living quarters, containing only those tiny English coal stoves, were cold and dank. The chow was greasy and tasteless. The weather was the poorest—rain, sleet, smog—of anywhere in Britain. Of course, this greatly affected the morale of the men trying to do a job. This was the story of the Hump all over again—the supplies and equipment and enough trained people to perform a highly technical assignment just hadn't been made available from the States.

Had I authority even to co-ordinate with the Air Materiel Command, I could have taken these problems up directly with them. The local commander who was able and conscientious could do little. As it was, all that my maintenance officers and I could do was point out wherein the trouble lay to the responsible persons at the depot, and hope that something would be done. But instead of action we got excuses and empty promises. Repeated requests to USAFE that it do the necessary bogged down in red tape. Inspections at Burtonwood fell to an average of less than two a day. As our operations were based on the firm figure of seven a day, this could conceivably mean a loss of 35 planes a week, 150 planes a month! I did not permit this loss to take place, of course, but the only way in which I could avoid it was to shift the responsibility for the two-hundred-hour inspections back to the squadrons. This was a double hardship, for I had already reduced their maintenance personnel by the Burtonwood transfers. The men remaining had to carry a double load, and they were justified in resenting it bitterly. It meant a twelve-hour day every day for my maintenance men.

The shortage of supply even extended to such basic items as wrenches and screw drivers. Yet all the time many replacement parts and tools

of every description were right there in the theater, stored away in a large depot near Erding, in the Munich area. A great mass of supplies left over from the war, carloads on carloads of supplies, had been poured into this depot at the very time when key personnel were being discharged from the service. Literally tons of equipment, millions of items, were unrecorded. No one could know for sure just what was in the depot or where it was. It was humanly impossible to change this general condition overnight.

Thus USAFE was not able to provide me with supplies from its own depot, and was leery about requisitioning them from the zone of interior, lest the Pentagon point out that it was asking for things it already had. This was no concern of mine. I needed those replacement parts and tools right then and there. I didn't care where they came from. I had a daily tonnage to meet. If I was short one day, I would have little opportunity, particularly with the weather and the supply situation, to make it up. On November 30, for example, one of those pea-soup fogs closed in on Berlin. You couldn't drive a car in the city that day, much less land a plane. Of forty-two planes which took off for the city, one landed. This was our lowest day. (We always got *some* tonnage in.) There was forty-one hundred tons the Airlift was short, right there. To make it up I needed the fullest support and co-operation of the headquarters directed to furnish that support.

Conditions were bad and getting worse as we neared the Christmas season. I began hearing of the great Christmas program being planned by Washington and USAFE for our Airlift boys. Vice-President Barkley was coming, along with Stuart Symington, Secretary of the Air Force, and Kenneth Royall, Secretary of the Army. But the big name to the GI's was Bob Hope. We heard it on the radio, read it in clippings sent from papers back home, in the *Stars and Stripes* and in our own *Task Force Times*—"Bob Hope to Bring Christmas Spirit to the Men on Berlin Airlift." Jinx Falkenberg and Irving Berlin would be in the show, too. Out on the bases everybody was talking about it. To men far from home, working long hours, living under conditions that were none too good in summer, terrible in winter, and made more dreary by the nostalgia of the holiday season, just the announcement of such a show brings a feeling of elation. Something to look forward to, to break the monotony, to talk about: this can go on for weeks.

On December 23, I learned, for the first time, the places and times for which the shows were scheduled. There would be two shows, one in downtown Wiesbaden, far from the air base, on Christmas Eve—for the USAFE headquarters boys, and one show in downtown Berlin, far from the airfield, on Christmas Day—for the Army troops there. After all that build-up about the show being for Airlift personnel, not one show was scheduled to be held anywhere near where Airlift personnel could see it.

When I heard this, I exploded. According to the official record of the staff conference on December 23, "General Tunner expressed his extreme displeasure over the Bob Hope show which had been billed as a show for the Airlift."

Extreme displeasure indeed! I was mad clear through. It was the Airlift which had brought Bob Hope to Germany, and everybody knew it. There was no reason for any entertainer, least of all one of Hope's stature, to put on a show for the occupation troops. It was my Airlift boys, working their butts off around the clock, who deserved that Hope show. I knew full well that events of this magnitude—the Vice-President of the United States and two cabinet members were involved—had certainly been approved by General Cannon, but that didn't stop me. I fired off an ultimatum to headquarters USAFE immediately: Either put on the Bob Hope show at the bases where Airlift personnel could see it—or strike all mention of the Airlift from the advance billing and publicity immediately. Think of what the press back home would make of that.

Hope, of course, had no idea all this was going on. He thought all along that he was being scheduled to appear before Airlift personnel. From my own acquaintanceship with him I knew that he was a great and good guy sincerely trying to help the Airlift, and he'd have been mighty distressed to learn that he wasn't. USAFE headquarters obviously didn't want him distressed, either, for within twenty-four hours some changes were made in Bob's itinerary. Express priority was given Airlift personnel at the Berlin and Wiesbaden shows, and three more shows were scheduled at Airlift bases. A great majority of the Airlift personnel did see the Bob Hope shows. I didn't get a chance to myself, but that was all right. I had done my job.

On Christmas Eve I briefed Secretary Symington on the Airlift and its problems, along with General Jimmy Doolittle, who was also visiting

us. Symington was intent on doing a thorough job, and I had some ideas on what that thorough job might include. On Christmas Day I took him over the Rhine-Main air base to show him the operation. General Cannon met us there. Symington covered practically every square foot of the working section of the base, introducing himself to the men, putting them at their ease, and then asking pertinent and intelligent questions. Thus he learned at first hand, from the men themselves, many of the unpleasant living conditions that I had been screaming my head off to USAFE headquarters about but which had never gotten to the Secretary of the Air Forces, to its Chief of Staff, or even to the Air Staff. In the maintenance section we stopped behind a grimy mechanic working on an engine. He looked around to see this obviously important civilian standing over him, flanked by a lieutenant general and a major general, and tried to come to attention.

"Relax," Symington said, for the hundredth time that day. "I'm Stu Symington. Just wanted to see how you're getting along with that engine."

"Oh, I'm going to get it fixed all right, sir," the mechanic said, "but I could do it better if I had better tools."

"What's the matter with your tools?" Symington asked.

The mechanic held up a screw driver, a wrench, and a pair of pliers. "See these?" he asked. "Well, I bought 'em myself right here in Germany, and they're all I got, and I can't get any more, and they ain't worth a good god-damn."

There was a long silence. Symington looked at me. "This is what you've been telling me all along," he said. Cannon turned red. I said nothing; I knew when I was ahead. Other men backed up that first mechanic. At the completion of the tour, Symington was all business. He wanted facts and figures furnished him immediately, in black and white, so that he could inaugurate action immediately to ameliorate our most serious problems. He planned an immediate further inspection, and in the meantime, my entire staff and I got to work right away gathering and preparing the material he needed. We worked the rest of that day, Christmas, and all the next. None of us could have asked for a more wonderful Christmas present than this opportunity to present the facts where they would receive action. On the morning of the twenty-seventh I personally placed in Symington's hands a thorough and meaty memorandum, with a copy to USAFE. Subject: "Supply and Maintenance

Problem—First Airlift Task Force." It specifically cited the difficulties in two-hundred- and one-thousand-hour inspections, level of supplies, shortage of shop equipment, and training of aircraft mechanics, as well as the situation in housing facilities and allied matters. Each problem was followed by our recommendation for its solution.

The response came almost immediately. Orders came down to requisition better housing, and construction began on emergency barracks. Burtonwood was shaken up from top to bottom, and the increase in two-hundred-hour inspections began almost immediately. Long-needed supplies began flowing in. Frankly, I was amazed at both the amount and the immediacy. Symington must have gone straight to his office from the airport and started pushing buttons right away. Staff officers from the Pentagon began to come over in increasing quantities.

From then on our problems in the areas of housing, inspections, and shortages of supplies were of far lesser significance. A rotation system was set up by Air Force headquarters to relieve the onerous extended-TDY situation; a crew-training center Kuter had set up earlier at Great Falls now made this possible. It was still somewhat difficult operating under an unsympathetic command, and I am still convinced that we could have performed our mission more successfully had we had greater authority to run our own show, but at least from then on we had sufficient tools to work with.

I also took advantage of Symington's Christmas visit in another matter. Over the years I had been giving much consideration to the utilization of bigger planes in air transport. On the Hump, you may recall, I planned eventually to replace all the two-motored C-46's and C-47's with the big, ten-ton capacity C-54's. The war had ended before this plan could be put into effect. When I was first brought into the Berlin Airlift we were, through necessity, flying a large number of C-47's. In this operation in particular, where space for planes was at a premium, there was no place for this sturdy little ship, and by October the Air Forces had replaced them all with C-54's. But this was the year 1948, and now the C-54 was as obsolete, cargowise, as its predecessor, and practically in the same proportion. Shortly after the war Douglas Aircraft had come out with a new transport plane, the C-74, designed strictly for the military, with a capacity of twenty-five tons. Thirteen of these giant planes were built. One was broken up in static tests, one crashed, and the

remaining eleven became a part of the MATS fleet. Before the Berlin blockade I studied the plane's performance over a period of a year and a half and presented a paper praising it highly and pointing out the many advantages and economies the big new plane, with a few modifications, would provide.

In Operation Vittles the big plane proved itself. I begged Kuter to loan me some. He did—one. It might be interesting to note what I said about this plane back in October, 1948, when the Airlift was just getting underway. The following is from an article written by Paul Fisher and published in the United Aircraft Corporation's *Beehive:*

General Tunner reached into a pile of papers and lifted out a chart.

"The lessons we've learned from the Airlift are tremendously important," he said. "Or, if you want it another way, we've proved concretely here some important things we believed all along. We know, for instance, that the future of military air transport—and this inevitably applies to commercial cargo transport—is in the big aircraft.

"Look at these figures," he went on, placing the chart on the corner of his desk. "A task force made up of 68 C-74's could haul the 4,500 tons needed in Berlin each day. It takes 178 C-54's to do the same job, or 899 C-47's. With C-74's you would only have to make 5,400 trips a month to maintain your tonnage average, where the C-54's must fly in 13,800 times or the C-47's 39,706.

"The economy runs all the way through. In the C-74 you would need only 16,200 hours of flying time a month, compared to 42,888 in the C-54's or 158,824 in the C-47's. Look at crews. One hundred and eighty C-74 crews could do the job where we need 465 for the C-54's and 1,765 for the C-47's. The same ratio in maintenance—2,700 C-74 maintenance men could accomplish the job that would require 4,674 on the C-54's, and 10,588 on the C-47's. And finally, you could fly the C-74's on 6,804,000 gallons of fuel, compared to the 8,577,600 needed by the C-54's, or the 14,294,000 the C-47's would need."

(Editor's note: The C-74 gave proof of its utility September 18 when it was aloft twenty hours out of the twenty-four and carried 150 tons of supplies into Berlin. Six round-trip flights were made in

the twenty-four hour period, two more than the usual "four-block-a-day" schedule followed by the C-54's and C-47's.)

General Tunner pushed the chart aside.

"The future of air cargo is not necessarily in high speed. It's in big airplanes, driven by powerful but economical and reliable engines. The big, efficient, dependable piston engine right now looks like the modern cargo plane power-plant answer, at least for some time.

"Here we knock ourselves out flying thousands of hours with the C-47. The boys simply work their hearts out and at the end of the day they realize that all they have flown into Berlin was a dribble. I'm not minimizing the fact that C-47's and C-54's have done this job. You can't take away their magnificent performance and I, for one, think these aircraft gain stature for doing a job for which they were never designed."

Later, as we flew more and more tonnage into Berlin, the superiority of the twenty-five-ton transport became more and more obvious. With one plane which could do the work of three, all of our major problems would have been proportionally reduced. With only one-third of the flight crews and ground crews to house, quarters would not have presented such a problem. With a third of the airplanes to maintain, the situation at Burtonwood would have been less desperate.

As we steadily increased tonnage, it was necessary for us to increase the number of bases. More and more bases were put into service until at the peak of operations we were flying from nine bases in West Germany into three airfields in Berlin. I have already explained the elaborate procedures necessary when we were operating with only three bases and two fields in Berlin. Though we tried to keep procedures simple, it was unavoidable that, with nine bases feeding into three fields, complications resulted. If we had had a full fleet of the Douglas C-74's for the Airlift we would have been able to deliver eight thousand tons daily using only two bases in West Germany and one field in Berlin. Imagine the savings! Using more bases, and two fields in Berlin, we could have increased the tonnage up to twenty-four thousand tons a day, far more than the city required, and in addition could have taken out every single item that was manufactured there. Even this could have been done at considerably less expense than the actual operation with ten-ton planes.

When, back before Christmas, I learned that Symington was coming to visit the Airlift, I determined to take full advantage of his visit and show the Secretary of the Air Force the advantages of big-plane operation. Even if he approved the program immediately and sold it to Congress overnight, the planes wouldn't come off the line in time to help us on the Berlin Airlift (unless it continued for years), but I was not thinking in such short-range terms. It was becoming obvious that the Soviets weren't going to let the world live in peace. There would be more situations requiring prompt and effective action by American air transport. For the safety and security of our country, and to carry out whatever mission it should be assigned, that air transport should be more than adequate. It should be based on suitable equipment—big planes.

And so I had a series of graphs drawn up showing clearly and unmistakably the value of the twenty-five-ton plane not only to the Berlin Airlift, but to the American Air Force. When Symington came to Airlift headquarters for his first briefing, I was ready for him. At our first meeting, after a careful briefing on the Airlift, I got right onto the subject of the twenty-five-ton plane. He listened intently, and I could tell that he saw the good sense in big-plane operation. From what transpired later, he obviously set about getting this airplane into the inventory of our Air Force immediately upon his return to Washington. I had given him the concept, but he carried on from there in exhaustive detail, encouraging and approving numerous refinements and improvements. The final result was built by Douglas, just as the C-74 had been. It was the famous C-124, the Globemaster. The C-124 carries fifty thousand pounds. The front opens up like a clamshell, and ramps go down like the legs of a praying mantis. You can roll any cargo you want, even light tanks, right into this big beast. For years now it has been the backbone of the American military transport inventory. The first few were used on the Trans-Pacific Airlift to Korea. Since then they have been used, and used heavily, in air transport all over the globe. Though obsolescent now, they still comprise the majority of the MATS fleet. They have served their country well, and I don't know what we would have done in the emergencies of the past few years without them. I'm proud of the fact that they got their start in that briefing room in Germany at Christmastime in 1948, but the full credit for them, and the gratitude of the nation, should go to Stuart Symington.

A year or two after the Berlin Airlift ended, I happened to run into Symington in Washington. I was still impressed by the promptness with which he got the flow of supplies moving toward us in those terrible, shortage-ridden days on the Airlift.

"Tell me, Stu," I said, after we had shaken hands, "I've often wondered—what buttons did you push when you got back to Washington from Berlin? Things really started popping."

He laughed. "Oh, I wouldn't say that I'd come up with anything special," he said. I then expressed to him my appreciation, as a member of the Air Force with a special interest in air transport, for his successful efforts in obtaining the C-124 for our country.

"Thank you," he said, "but I can't take the credit. It's you who are the father of this big airplane."

Visitors to the Airlift were by no means restricted to our own American VIP's. Such was its appeal, so strongly did it capture the imagination of the free world, that we were constantly being visited by national leaders, military men, and well-known journalists from many countries. They all had to put up with a degree of informality. In the very first few days, a party of VIP's bound for Berlin in a C-47 landed at Wiesbaden for lunch. When they came back to their plane, they found it loaded with flour.

Clement Attlee, then the British prime minister, chose a most unfortunate day to visit us. As he was en route from England, violent winds developed in Berlin. They were of gale strength, up to fifty miles an hour, and of course they were blowing right across the runway. There was dust all over the place, hats blowing, a real picture of confusion. The British at the time did not have a single plane on the Airlift with a nose wheel; all their planes had tail skids or tail wheels, which made it more difficult and dangerous to land in strong crosswinds. By that time all American planes on the Airlift, on the other hand, were equipped with nose wheels, and we were able to continue operating after the British had shut down.

In the meantime, the Prime Minister was on the way in a British plane. He was apprised of the conditions by radio and advised to put in at Rhine-Main and transfer to an American plane for the flight into Berlin. I flew up to Gatow to be on hand to meet him. The British were waiting for their prime minister there in the dust and the wind with all the full

strength and glory of the Empire—senior officers standing ramrod-straight, guards of honor, the works. Finally here came a lone American plane out of the sky to discharge the Prime Minister and a cloud of black dust. He'd come in on a load of coal. His first words to the welcoming committee were: "Why don't British planes have nose wheels?"

And the first words in response were, "We shall look into that immediately, sir."

Another important English personage to visit the Airlift was Foreign Minister Ernest Bevan, a huge man, and outspoken. We had been told that he was quite sick, having just recovered from a heart attack, but from the very beginning he gave the impression that he could well take care of himself. I was briefing him, using large charts, and at the top of one of them was written in large letters, "Organizational Chart."

"What kind of a word is that?" grumbled the invalid. "Organizational! What does it mean? Is there such a word in the English language? I should certainly say not." Though quite amicable, the Foreign Minister frequently made his presence felt with such a comment. Later we were driving along the line at Tempelhof when we passed a C-97, a huge plane built by Boeing and known on civilian airlines as the Stratocruiser. This one model we had on the Airlift on temporary loan was the forerunner of a great line of planes, and I was very proud of having it. I asked Bevan if he'd like to look at it more closely, and he replied, "Why, certainly!"

We drove over to the plane, and he and I and his two attendants, who were doubtless instructed to see to it that he did nothing to strain his heart, all got out and had a pleasant chat with the pilot and copilot of the big ship.

"Would you like to go aboard it, sir?" I asked. The two attendants looked daggers at me, for this would mean climbing stairs. Bevan, however, agreed with alacrity, and we all made our way up the steps into the lower deck of the plane.

The Stratocruiser was a two-story airplane, with a ladder leading up to the cockpit from the first deck. "Would you like to see the cockpit, sir?" I asked.

"Why, certainly I'd like to see the cockpit," our distinguished visitor said. His two attendants grew paler.

At the top of the steps was a hatch cover, about three feet square.

A young enlisted man who had obviously just come over from the States sprang to precede our distinguished guest up the ladder in order to lift the hatch and give him a helping hand. For some reason this kid had been hoarding his coins. At any rate, when he had reached the top and leaned over to help Bevan up the stairs, the flap of the top pocket of his flying jacket popped open and a shower of coins poured out, all over the British foreign minister. With the swiftness of reflex action, the kid turned loose the hatch cover and dived for his coins. The hatch cover dropped on Bevan's head. The two bodyguards gasped and started to go for their guns.

Fortunately, the hatch cover wasn't very heavy, and Bevan had a sense of humor. He laughed good-naturedly, rubbed his head, and went right on up into the cockpit. I didn't say a word to the airman; no punishment I could have meted out would have been worse than the shame and embarrassment written all over his face. I hope that as the years went by he has recovered from his mortification. He is, after all, probably the only man in the world who has dumped a pocketful of American money on a British cabinet member and then hit him on the head with a hatch cover.

The steady stream of visitors in no way interfered with the constant, pulsating continuance of the Airlift. It went on day and night, night and day. An interesting observation was that of every three planes that droned on overhead, two were loaded with coal. To many of us this pressing need of the modern city for coal was something of a surprise. Sixty-five per cent of everything we took into Berlin was coal. Without it the city could not survive, for coal meant far more than personal comfort. It meant light and power, and water and sewage—coal made the power which drove the pumps—and other municipal facilities. The importance of coal affected other commodities, too. You would think, at first, that an excellent foodstuff to carry in to the hungry citizens of the beleaguered city would be good old beans, cheap and rich in both carbohydrates and protein. When you consider the length of time necessary to cook beans, however, and the coal required for that long supply of heat, it's easy to see that for Berlin beans were not a practical food.

The Task Force was not charged with transporting the coal from the mines to the bases; that, for which we were thankful, was the province of the Army Transportation Corps. They did a fine job and maintained

a high level at the bases. Nor was there any trouble in getting it on the planes, for our eager-beaver DP's, and later German labor companies, were, if anything, overindustrious. I personally proved this on one occasion. As I made my periodic informal visits to air bases, frequently at night and wearing an old field jacket with almost indistinguishable stars, I began hearing pilots muttering about the strange way the ships were handling.

"It seems an awful lot more sluggish than it ought to," one airplane driver said. "It handles like a truck. First couple of times I thought it must be the cargo, but I watched them load it, and it checked out right on the button—two hundred sacks of coal at one hundred pounds per sack."

I heard more or less the same story from other pilots. Some had complained to maintenance, some had chewed out their ground crews, but still the strange sluggishness persisted. And it was always when the cargo was coal.

One day I went down to the big loading yard on the Main River, where the coal barges were brought in, and watched the unloading proceedings. The coal came rattling down out of the barges in chutes, then into sacks held by the civilian workers. The sacks were then loaded on trucks for the haul to the air base. The men were really working away, filling the sacks to the brim and hoisting them onto the big trucks with vim and vigor. They only bothered to weigh about one sack out of a hundred, and when it was overweight, as it invariably was, they simply poured a little coal out and threw it on up in the truck. I stepped forward and had fifty of the sacks already on the truck taken down and weighed. Some of those so-called one-hundred-pound sacks ran up to 125 pounds; they averaged out at 115—a 15-per-cent overloading that would mean a ton and a half extra weight on a C-54 full of coal. No wonder the plane seemed sluggish. The Army Transportation Corps took over the problem, and it was corrected. It had to be carefully explained to the loading crews that their overzealousness was hurting us instead of helping us.

I have mentioned the headaches caused by coal dust. In particular, it had an abrasive effect on control cables and caused erosion in electrical contacts. It even covered the outside of the planes with a grimy coating that wouldn't wash off. We tried everything to combat it. Our packaging experts quickly proved that a sack made of several thicknesses of paper was a better container than the jute bags which had replaced

the emergency duffel bags. But still the dust escaped. We tried dampening the coal, but all this did was increase the weight. We tried sealing off the cargo compartment. Some ingenious mechanic worked out a method by which one end of a rubber hose could be thrown out the porthole, where the slip stream created a suction. With the other end of the hose the plane could be vacuumed while en route back to its base. Another of our creative thinkers worked out a shoeshine method to get the stuff off the outside of the plane. A thirty-six-foot long piece of anti-icing cloth was thrown over the top of the plane, and one man on each end pulled it back and forth over the back of the plane. But still the coal-dust-caused maintenance problem continued. We never did lick it.

Gasoline, which had been our major cargo on the Hump, presented something of a problem at first. As it was necessary to bring back the fifty-five-gallon metal drums in which we took the gasoline into Berlin, they had to be steamed clean in Berlin. When the British brought in a fleet of tanker planes, we welcomed them with open arms. This became an RAF-supervised operation. At one time as many as forty-two tankers were assigned to the Airlift.

The British also came to the rescue when we encountered problems in hauling salt. Thirty-eight tons of salt a day were required in Berlin, and there are few commodities harder on an airplane; salt's corrosive action eats away the alloys and cables. The British early volunteered their big Sunderland flying boats, which were treated to resist the corrosive action of sea water. The Sunderlands were our salt carriers until early winter, when ice on Havel Lake, where they landed, terminated their use. Actually, I was glad to see them go, as they were slow-flying, ponderous crates, and had to be specially scheduled. After they were frozen out of the Airlift, the RAF assigned Halifax bombers to the salt run. Salt was carried in special panniers slung in the bomb-bay section.

After coal, food was next high on the tonnage list, with flour the largest single commodity among foodstuffs. Daily requirement of flour was 646 tons—along with three tons of yeast. Dehydrated foods became more and more important as processors learned to squeeze the water out of more and more commodities. Dried milk, both whole and skimmed, amounted to over forty tons a day. But all the time, we carried in some quantities of fresh milk, fresh eggs, fresh vegetables, fresh meat. One of the odd little items was a supply of banana flakes for children on a special diet.

Toward the end of the Airlift we were flying in huge parts of a new power plant being built in the British section. Some of the single pieces weighed as much as thirty-two thousand pounds. One steel shaft weighed twenty-eight thousand pounds. By utilizing the big C-74 and the C-97 we had on hand, plus a C-82, forerunner of the C-119, we managed to get all of this massive equipment into Berlin.

Some of our heaviest loads came out of Berlin rather than going into the city. Several small factories continued to operate there. One, incidentally, manufactured loud-speakers for which we flew in the magnets. On the first such trip the load of magnets wreaked havoc with the planes' compasses. After that it was necessary to demagnetize the magnets before loading, and remagnetize them again in Berlin. One of the heavy items manufactured in the city was an electric engine used to haul coal cars in the mines. We brought several of them out of Berlin. Thus, in a sense, the Airlift performed an endless chain: Coal delivered to the mine entrance by these sturdy little engines was delivered by the Airlift into Berlin to make more engines to be delivered to the mines to get more coal to build more engines.

One of the clumsiest items to load proved to be grand pianos. Eyebrows may raise at this strange cargo. Our role as piano movers, however, came about naturally. At the very beginning of the Berlin blockade, when the Communists were proclaiming that the Western powers were going to move out and leave the people of Berlin flat, General Clay immediately determined to keep American forces, complete with families, in the city to show the Russians we wouldn't be bluffed out. The families of the service people almost unanimously elected to remain with their husbands, and General Clay's determination was further enhanced. When the normal tour of duty ended for these individuals and they were transferred out, they had a right to take their personal belongings with them. It sometimes rankled us on Operation Vittles to fly out a grand piano and other loot for someone who probably had gone into Berlin with only a duffel bag, but ours was not to reason why. As a matter of fact, from the beginning it was made clear that neither the British nor the American nor the Combined Airlift Task Force would determine what was to be flown into or out of Berlin. That was the responsibility of the Air Staff Committee in Berlin, composed of representatives of the French, British, and United States Officers of Military Government.

I would not have it any other way. It is the function of an airlift to

deliver the goods, not to determine what goods should be delivered. I had seen this problem of determination of cargo on the Hump, and I would see it again in Korea. Great pressures were sometimes brought to bear on the airlift commander to grant favors. Those who wanted certain items but hadn't properly defended their requirement before the board or committee would say unnecessary items were being honored in the requests of others. But we stood with the rules.

The daily minimum supply requirement considered necessary for the city of Berlin was revised upward on the twentieth of October from a total of 4,500 tons to 5,620 tons. These included commodities ranging from baby food to bulldozers and people. The 5,620 tons were broken down as follows:

For the German Populace:	*Tons*
Food	1,435
Coal	3,084
Commerce and Industry Supplies	255
Newsprint	35
Liquid Fuel	16
Medical Supplies	2
Subtotal	4,827
U.S., British, and French Military:	763
Three C-54 Passenger Flights Daily (U.S., and French)	30
Total	5,620

One of our most delightful cargoes was encompassed by a name of its own, "Operation Little Vittles." It began when one of our pilots, First Lieutenant Gail S. Halvorsen, made an off-duty trip to Berlin to stroll through the city and see what was going on. This was somewhat unusual, incidentally; for most pilots Berlin was simply the turn-around point. Halvorsen had long been used to attracting crowds of kids. It had begun back in his home town of Garland, Utah, where he taught the small fry of the community to ice skate and play hockey. As a pilot with the Ferrying Command, he got plenty of chances to talk to children in Africa, Brazil, and points east and west. Halvorsen didn't smoke or drink, but he liked candy and gum, and his pockets were always full of it. Somehow the kids all seemed to know.

It wasn't long, strolling through Berlin, before Halvorsen had a crowd around him. Although Halvorsen's German was about as good as their English, a little sign language helped, and he and the crowd of children talked together for an hour or more, mostly about piloting the big C-54 which brought food to Berlin. Halvorsen realized what was different between these children and the others who had surrounded him in so many communities over the world: These kids hadn't asked him for a single solitary thing. It wasn't that they weren't hungry, he learned, but rather that they were disciplined and shy. Halvorsen emptied his pockets, and then he had an inspiration. "Be at the end of the runway just outside the field the next day," he told them, and as he came in for a landing, he'd drop them some more gum and candy. That night, working with a labor of love, Halvorsen busily made little parachutes of handkerchiefs, and slung candy bars from them. Next day, as he came in over the runway, suddenly the kids waiting beneath saw a cloud of small white objects burst out of the plane and gradually float down to their eager hands. "Operation Little Vittles," had begun.

Word of Little Vittles spread among his fellow pilots, then through the entire squadron and the base. I met Halvorsen and gave him my personal encouragement. Soon he had so much to drop that he had to call on other pilots for help. Journalists covering the Airlift heard about it and sent word of Operation Little Vittles back to America. It caught on, and Halvorsen was invited to make a quick trip back to the States for a personal appearance on the popular radio show "We the People." The response from the millions of listeners to that program was fantastic. Halvorsen's unit, the Seventeenth Air Transport Squadron, was daily flooded with candy (and handkerchiefs for parachutes) by the generous American people, as well as from some candy manufacturers, and Halvorsen and his buddies saw to it that it got in the proper hands—and stomachs. One day in the spring, my Berlin detachment arranged an outing for thousands of Berlin children on Peacock Island in Lake Hegel, with a mass candy drop as the major event.

I happily approved all such programs. The people of Berlin were fighting for freedom in their own way, with subsistence on minimum diets in constant cold, and I was much in favor of these little extras on their behalf. Another program that went over, incidentally, was the open house we held periodically at all the bases. We wanted the German

people to come in and see what we were doing, and they did. The pilots would take the kids through the planes.

Despite all our problems, tonnage increased. Our first big day was Air Force Day, September 18, when we emulated our successful celebration of that day on the Hump three years before and set out to break records. We airlifted a total tonnage of 5,582 tons to Berlin in the twenty-four-hour period. The British added 1,400 tons, for a total of 7,000. It was one of those all-out, enthusiastic efforts that permeated the entire command. It gave us all a booster shot of enthusiasm, and the daily tonnage stayed high. We continued to get good tonnage all through October and into November, and then the weather closed in on us. Let the San Franciscans and the Londoners talk about the fog in their respective cities; I can assure them both that Berlin had the world "beat" that fall of 1948.

Fortunately we had anticipated bad winter weather, and even though that winter was the worst for forty years so far as visibility was concerned, we were still able to keep a reasonable amount of tonnage flying into Berlin. As weather conditions were not as bad in the northern and central corridors, I shifted as much traffic as I could to those bases which were already in operation, and got Kenny Swallwell busy putting in more runways. I attempted to have Airlift headquarters moved from Wiesbaden to one of the bases in the British Zone, where our greatest effort was being made and which would be closer to Berlin and therefore more convenient. My British boss, Air Marshal Williams, approved, but General Cannon had no intention of letting the Airlift out from under his watchful eye. We stayed where we were.

The first British base used heavily by American planes was that at Fassberg. Built in 1936, it was considered one of the *Luftwaffe*'s finest. It was complete in every detail from an indoor swimming pool and lavish officers' clubs down to the gleaming porcelain vomit basin mounted on the wall of the day room, to which those who had imbibed too much beer could stagger. Even so, a large amount of heavy construction was necessary to enable Fassberg's loading ramp to hold the sixty-five C-54's we put there. Fassberg had the unique distinction of being an RAF base under command of an American Air Force officer. To this base I sent one of my best men, Colonel Jack Coulter, with his lovely wife, film star Constance Bennett. Though the combined opera-

tion worked well, if I had to do it again, I'd bear in mind the differences in food preference. For one thing, the English and Americans differ widely in their idea of a good breakfast. I know now that most of our GI's prefer eggs to kippers and porridge.

From the standpoint of personnel, the British officers assigned to us fit in perfectly. My plans officer, Group Captain Noel C. Hyde—known to all of us as "Groupie"—was a particularly welcome adjunct to the staff. He was never caught wordless. I remember one period when everything was going wrong at Fassberg. At a conference one morning I told every staff officer to think about Fassberg overnight and have a concrete recommendation to make next morning to improve morale and operation of the place. The following day I called on each officer for his recommendation. Every man came up with a pertinent idea, and when I got to Groupie the remedies were just about exhausted.

"Sir," he said, "I lay awake most of the night, and all I could think of was to say a prayer for Fassberg."

Other British bases included Celle, to which we moved a troop carrier wing of C-54's in mid-December, Fuhlsbüttel at Hamburg, Lübeck, Schleswigland, Wunstorf, and Bückeburg, from which a shuttle passenger service was operated. Lübeck, incidentally, was the receiving station for the sixty-eight thousand persons—undernourished children and older people in ill health—who were flown out of Berlin. Australian, New Zealand, and South African squadrons operated out of Lübeck in addition to the English squadrons.

Operating both by day and by night, and in that awful fog, we desperately needed high-intensity approach and runway lighting equipment. Lighting was a high-priority item back home, but we managed to have a reasonable quantity diverted from military and civilian installations in the States to the Airlift. It was at Tempelhof that the need was greatest, for though huge, the field was surrounded by high apartment buildings. These buildings seemed to negate the possibility of extending the lights along the approach to the runway, for this type of lighting works best at ground level. The only possibility was a narrow area leading to the field through high buildings on either side. It was a cemetery. To install the lights there would require disturbing several graves. This was a delicate matter, and Swallwell took it to the Berlin city officials. They agreed without hesitation.

Another delicate matter was what to do about the high spire of a

church which would block out several lights when coming in on the approach. Members of the congregation agreed readily to our proposal that the high spire be removed and a lower roof, designed to their specifications by a German architect, be erected in its place.

Of the three fields in Berlin, Tempelhof and Gatow were extensively improved with the addition of runways and aprons, among other things, but Tegel, in the French sector of Berlin, was built from scratch.

The story of Tegel is a full and complete chapter in itself. It had become obvious during my first weeks on the Airlift that we just did not have enough landing space in Berlin. We had two runways at Tempelhof and a third under construction; there was no room for more. Gatow didn't lend itself to further expansion. We needed a complete new field. It seems incredible that a tract of attractive, undeveloped land big enough for an airfield could exist in the city, but it did. It was a big, rolling field which had been used for anti-aircraft training before and during the war. It was located in the French sector, but the French were easy to deal with. General Jean Ganeval, the French commandant in Berlin, agreed readily to the proposition that we would build a field and control the traffic, while the French would maintain everything we put there and provide for the unloading of the aircraft. Swallwell, with the help of the USAFE and army engineers, designed the plans and supervised the project. Once again I patted myself on the back for having brought him along, for problems continually arose which would have stumped just about anybody else. The early runway specifications, for example, called for a minimum foundation two feet thick, which normally would have been composed of cement. But in all Berlin there was neither cement nor the equipment to mix it. Bringing it in by air would have meant replacing too many tons of vital supplies. We had to find some substitute material there in Berlin.

"That's a snap," Kenny Swallwell said with a grin. "Our own Air Force had the foresight to provide all the material we need over three years ago. There's enough brick rubble from bombed-out buildings in Berlin to build a dozen runways."

The bricks were collected from the ruins which surrounded the field and spread out on a hard surface. Caterpillar tractors ground back and forth over them until they were dust. German civilians—men, women, and children—worked eight-hour shifts around the clock carrying the resulting rubble to the site of the runway and spreading it. For topping,

they crushed paving blocks. As many as seventeen thousand civilians were on the job in one twenty-four-hour period. The work began early in September, when the weather was still hot, and you could see women in bikinis and men in swimming shorts toiling away. Some venerable old steam rollers, built before World War I, were located and patched up, and they provided excellent service in packing down the brick dust. The other heavy equipment used was brought in the way we'd been flying heavy equipment all along; it was cut up, flown in in pieces, then welded back together again.

The engineers had originally promised the field by January 1. When they saw what those German civilians swarming over the place could do, the date was revised to mid-December. The first plane landed, on a completed runway of more than adequate strength, on November 5.

There was still a serious problem at Tegel, the two-hundred-foot aerial tower which stuck up in the approach path. Though the tower itself was in the French Zone, it was owned by a Communist-controlled station in East Berlin. The proposal that it be dismantled was, of course, refused by its Soviet-sponsored operators. General Cannon and I flew into Tegel to attend the services celebrating the airfield's completion, and we could see that the tower was definitely a nuisance and potentially dangerous. Again the request was made to the station that we be permitted to take down the tower, with full compensation, but again we were refused.

A few days later General Ganeval invited the detachment which we had stationed there, composed of some twenty officers and men, to come up to his office for a mysterious meeting. When all had arrived, General Ganeval shut and locked the door. The procedure seemed somewhat strange at first, but the general provided such excellent refreshments, and exuded such Gallic charm, that all suspicions were allayed. Suddenly, in the midst of the merriment, a mighty blast rattled the windowpanes and shook the room. French and Americans alike dashed to the window just in time to see the huge radio tower slowly topple to the ground.

"You will have no more trouble with the tower," said the General softly. The Reds screamed to high heaven and attempted, as the French had anticipated, to lay all the blame on the Americans. Our detachment had an ironbound alibi, however: they had been under lock and key.

Another gala affair, somewhat more impromptu, occurred in the

Communist-dominated capital of Prague. The weather was terrible that day, with fog and heavy rain, and on top of that the pilot of a C-54 bound for Berlin took the wrong heading over Fulda. He flew on and on. Finally he came to a hole in the clouds, and there beneath him was an airport. He didn't question his luck any further; he just wanted to get that plane down on solid ground. Shortly after he found himself, with crew, plane, and ten tons of coal, at Prague, Czechoslovakia. The Czech Air Force officers gathered around, and soon great rapport developed. The Czechs insisted that the Americans be their guests at dinner that night; and the crew, tense from flying lost through fog all day and not averse to unwinding with a little food and drink, accepted. First, however, the pilot said, he would appreciate it if someone would call the American Embassy in Prague and tell them an American plane was in town. In a surprisingly short time, the American military attaché was at the field, doing his best to break up the party.

"I don't want to seem inhospitable," the military attaché said, "but if I were you fellows, I'd get the hell out of this place as quick as I could. This country is crawling with Russians. The Czechs don't like them, and they do like us, but the fact still remains that it's the Russians who are calling the shots. So now how about getting out of here quick, huh?"

"We're dead-tired," the pilot said, "and we'd sure like a little sleep. These fellows here say they'll put us up for the night. Suppose we do that and clear out first thing in the morning."

"O.K.," the military attaché said, "but if anything happens, it's your funeral."

In the meanwhile, the Czech officers had arranged the party. There was plenty of good food, excellent wines and liqueurs, and good camaraderie. Everything was just fine. But hardly, it seemed, had the three Americans turned in when they felt themselves being shaken awake. It was the military attaché again. He'd been tipped off that the Russians had found out about the American visitors and were at that moment trying to track them down.

"You better get out of here fast," the military attaché said.

The boys did just that. They dressed, slipped out to the airplane, got in, started the engines, and took off, just like that. It was still lousy weather, and they managed to get home without being seen.

Some time later the military attaché came through Wiesbaden. "Every

Czech officer who was at that party or had anything at all to do with the American fliers," he told me, "has now disappeared. Vanished without a trace or clue."

The CALTF was a truly combined force. In addition to units of the Royal Air Force, there were units of the Royal Australian Air Force, the Royal New Zealand Air Force, and the South African Air Force.

Two United States Navy squadrons also participated in the Airlift. They were not only Navy, but they represented the very cream of the Navy. They came in with the obvious resolution that they were going to show naval superiority, and I welcomed their spirit wholeheartedly. It was a pleasure to have them aboard.

So pleased were we to have them, we told the pilots as they arrived, that we had even arranged a special and appropriate weather condition for them. They came in during November, that rainy November. As a matter of fact, the weather was so terrible that some of the incoming planes weren't permitted to land at Rhine-Main and were sent on as far as Vienna. Most of them did come in, though, and I made it a special point to be there waiting for the first arrivals. What a reception! The entire field was covered with water; at the hard stand where I awaited them, the water was up to my knees. As one of the mechanics pointed out to me, "This is the only place in the world where you can be up to your knees in water and have dust blow in your face."

The first R-5D, naval nomenclature for the C-54, landed in that sea of water, sending spray and spume high into the air. It splashed its way over to where I was waiting, and came to a stop. The door opened, and its crew looked out. I'll never know which of us must have looked the most ludicrous to the other. What I saw was a small group of men in navy blue uniforms with highly polished shoes preparing to step out into the winter mud and rain of Hessian Germany. What they saw was a two-star general standing in water up to his knees, trying to look dignified. Finally we all started laughing. There wasn't much else to do.

"General, sir," one of the natty young men in blue sang out, "just tell me one thing—are we at land or at sea?"

"Why, we ordered this just for you," I said. "We wanted the Navy to feel at home."

I operated under the assumption that the Navy had come to work, and I made the opportunity available to them immediately. After flying more than halfway around the world, the crew of the first plane to

arrive found themselves, less than four hours later, on the way to Berlin with a load of coal. They also had on board an Air Force check pilot. The regulations required all incoming pilots and copilots to make three trips under the supervision of a check pilot, and it just so happened that we had no check pilots at the time who were also naval officers.

As the days, weeks, and months went by, the two squadrons blended in excellently with the Combined Airlift Task Force. The Navy did some things differently; a naval squadron contained some 400 men in contrast to the 250 in an equivalent Air Force squadron. The Navy also carried a far greater inventory of spare parts and supplies. The end result was that the Navy maintained a somewhat more expensive, but more self-contained, operation, with less improvisation than the Air Force. For example, they insisted on doing their own overhauls at the base rather than send the ships to Burtonwood, and they were manned to do this. But each got the job done in its own way. We had twenty Air Force squadrons, two Navy squadrons, as well as the equivalent of ten Royal Air Force squadrons, and though the Navy squadrons were always near the top in performance, Air Force squadrons would hold the number-one spot at about the ten-to-one ratio you'd expect. On the Airlift the rivalry was fierce, but it was between individual squadrons rather than between the services. When Commander James O. Vosseller's VR8 squadron exceeded its quota by over three thousand tons in one month, we all took off our hats to him and his men.

And so the winter went on. Working with the handicap of limited equipment and the other shortcomings of the divided command required constant attention, seven days a week. The long hours took their toll. I lost weight and developed a persistent cough. I was ordered to take a few days rest, and Spain was recommended as a quiet place. Somehow or other the Spanish government got the impression I was a most influential person, and, in the current Spanish effort to woo the United States, set out to make my reception in Madrid a memorable one. The plane was met by a military band and at least fifteen reporters shooting questions at me in Spanish. A colonel who gave his name as Sartorius was being solicitous all over the place. I nearly turned around and went right back to the comparative peace and quiet of Operation Vittles, but it finally turned out for the best. Colonel Sartorius furnished excellent accommodations, and I did get a few days rest.

Though those of us who devoted our full energies to the operation

of the Airlift had little time left over for the power politics going on around us, we did keep up with the situation in general. For in Berlin, and in the great capitals of the world—Washington and Moscow, Paris and London—great changes were taking place.

Today, with the Berlin Wall brutally sealing off the two sectors of what was once one of the world's largest cities, it is hard to remember that when the Berlin blockade began, the people of Berlin could travel about the entire city with comparative freedom. Many Berliners lived in one sector, worked in another. There was but one city government; the elected city assembly and its executive council, the *Magistrat,* met at city hall, which was in the East Sector. So were many municipal offices to which people came from all over Berlin. The bank that handled the city's finances was located in the East Sector. It was not until the blockade proved ineffective and it became apparent to the Soviets that they could not engulf the entire city that they began ruthlessly to divide it.

Negotiations between the four powers in Berlin itself reached an impasse almost immediately and moved up to higher diplomatic levels. On August 2, as I was looking over the facilities at "Oberhuffin'puffin' " to determine whether our two-hundred-hour inspections could be performed there, the first high-level conference on Berlin was being held in Moscow, with Premier Stalin and Prime Minister Molotov receiving a delegation from the West. As the senior ambassador in Moscow, former General Walter Bedell Smith, who had been General Eisenhower's right hand man in World War II, led the delegation. Ambassador Smith, who of course had never seen the Hump Airlift, revealed later that he had little faith in the ability of the Airlift to supply Berlin, but apparently he played his cards close to his vest and did not reveal his doubts to Stalin and Molotov.

At the meeting Stalin played the role of the genial, easy-to-get-along-with leader, and the meeting at first seemed to be a success. When the broad generalities agreed upon there were brought to Berlin for implementation, however, negotiations bogged down completely. Although many more meetings were held on all diplomatic levels in the ensuing months, the blockade continued.

And so did the Airlift. As more C-54 squadrons came in, as we stepped up the beat, as the people of Berlin could look up into the sky on any clear day and see our planes coming in, one after the other,

steady as clockwork, they could not help but be impressed. They came to Tempelhof by the thousands to watch the planes come in. As one Berliner expressed it, he was at first dubious over the possibility of the Airlift's success, then hopeful, and finally, he noted with jubilation, he reached the stage of "earplugs on the bedside table."

The Airlift gave the Berliners a rallying point. Its mere inception, even in its first unorganized beginning, helped the people's morale in that it was a daring innovation and something to talk about. It helped dispel the cold fear in the hearts of those who would never forget the Russian orgy of looting and raping that the Western powers would depart and leave them to the Russians. It helped dispel the fear of hunger, and it even helped dispel the fear of another war. For the Berliners could see that this was a clever, nonviolent way of circumventing the blockade.

Before I arrived, a tragic event had occurred which served as a strong catalyst in polarizing the thoughts of the people of Berlin. An American C-47, coming into the city with a full load of food, had crashed, and its pilot and copilot had perished. The entire populace grieved. Mayors of the six boroughs in West Berlin together visited Colonel Frank L. Howley, the military commandant, to express their sorrow. A plaque was erected at the site of the crash paying homage to the two American fliers. "You gave your lives for us!" Fresh flowers were kept constantly by the plaque, and for weeks letters and expressions of regret poured in from the people to newspapers and American headquarters.

On September 9, despite every effort made by the Communists to prevent the meeting, 250,000 Berliners gathered at a meeting in front of the Reichstag. Franz Neumann, leader of the Social Democrats, Ernst Reuter, mayor-elect, and others addressed the crowd. It was the first big sign of resistance.

When the Soviets first announced that there was plenty of food in the Eastern Zone for anyone who would come and register to get it, it was still summer, and the extremely small numbers of Berliners who did register perhaps did not prove much. But as winter came on, the numbers still remained low. Communist newspapers appealed to the residents of West Berlin to come and register for food, proclaiming that the fresh foods available were healthier than the dried and tinned foods we were bringing in by Airlift. There was so much coal in East Berlin,

the Communist papers bragged, that they were running out of places to store it. And yet, in spite of the inevitable shortages of food and fuel that winter, the highest cumulative total of registrants, including those persons who worked in East Berlin and those who lived in border areas close to the registration points, never exceeded 86,000—less than 4 per cent of the total population of West Berlin.

But the Soviets succeeded in dividing the city. They left people of West Berlin no choice but to choose their own government. Election day was set for Sunday, December 5. Communists promptly announced the boycott of the election, with the result that candidates represented only the three Democratic parties. Communists used every means at their disposal to attempt to keep voters from the polls, including threats of violence and reprisals. Yet, when election day was over, it turned out that eighty-six out of every one hundred bona-fide voters had cast their votes. It was truly a great day for freedom in Berlin.

And this, of course, occurred during our most frustrating days in the operation of the Airlift, as we struggled under terrible weather conditions and the problems resulting from a divided command.

Never, from the very beginning of my command until the end, had I subordinated flying safety to any other phase of operation. Despite our round-the-clock operation and the miserable weather conditions, our accident rate on the Berlin Airlift was less than the over-all average for the United States Air Force. Of the total number of lives lost on the Airlift, seventy-two in all, of whom thirty-one were American, the great majority resulted from nonflying accidents. One of the many journalists who visited us, on looking at our accident figures, burst out: "Why I'm safer on the Berlin Airlift than I am flying between Washington and New York!"

Though we never became complacent, yet the steadily mounting tonnage in February and March tended to give all personnel the feeling that we now had the problem licked, that they could rest on their laurels. We even had all the planes we needed: 154 assorted British types, 225 C-54's, with an extra 75 in the maintenance pipeline and at the Great Falls school, and 200 of the 225 in daily service in the corridors. In the air room at Airlift headquarters, no less than fifty analytical charts were kept up to the minute around the clock; a quick look, any hour of the day, would give me a clear over-all picture of the entire

complex. Things were going too well. It was necessary, I felt, to do something to shake up the command. But what?

The answer was competition, competition, *competition!* Just as, back on the Hump, we'd had our one-day Derby, just as we'd celebrated Air Forces Day just six months before, so now, in April, we would schedule one big Gung Ho Day with a quota set in advance for a far greater tonnage than we'd ever hauled before. What would be the occasion for the event? The calendar answered that question. In just a few more days it would be Easter Sunday. We'd have an Easter Parade of airplanes, an Easter Sunday present for the people of Berlin!

The first man I sounded out on the idea was Red Forman, now my commander at Wiesbaden. Red was all for it; for a moment we were silent with nostalgia, thinking of the days back on the Hump. Then I got the staff together and we began making definite plans. First, we decided on absolute secrecy. If we set a quota of, say, ten thousand tons —50 per cent higher than we had ever done before—and then failed to bring it off, the Communists would crow over it.

In spite of our secrecy, word of the impending event spread to USAFE, and up to Cannon's deputy, Major General Robert Douglas. (Cannon was in the States at the time.) Douglas called me immediately.

"I don't want to discourage you," he said. "But even if you have a lot of tonnage, and then drop way off the next day, Joe's going to raise hell."

"We're not going to drop off the next day," I told him. I was sure of that. We had learned on the Hump that after a big all-out push the tonnage would of course decrease the following day when we returned to normal—*but it would decrease to a higher plateau than had formerly obtained.*

By this time our loading experts had become adept at "marrying" loads—combining heavy solids with lighter and bulkier material for the most efficient operation. But for the big day, we knew from Hump experience, it would be wise to concentrate on one cargo. On the Hump it had been gasoline, here it would be coal. I had Ed Guilbert inquire discreetly of the Transportation Corps as to the amount of coal on hand, and he reported back that there was a stockpile of well over ten thousand tons, ready for the hauling.

Just as on the Hump, preparations for the big day would require

operations officers to schedule inspections with extra care. We wanted a full complement of planes on hand for Easter without causing a resulting shortage on the days before and after.

They did their job well. On Thursday the tonnage was a record-breaking 7,100. Next day it fell back slightly, but that was due to the bad weather. Then came Saturday noon, the beginning of the twenty-four-hour period called Easter Sunday. At all the bases, simultaneously, the sergeants from the Operations offices proceeded to the howgozit boards and tacked up their quotas for the day. Everyone knew there was something in the wind, and within seconds every board was surrounded by a group of men, peering, crowding, and whistling. As far as the Airlift personnel was concerned, the mystery was ended. This was going to be the biggest day yet. But as the total quota was divided up among the several squadrons, the significance was not yet open to the public and the press.

Though the extra quota would mean extra work, it was greeted with but little griping. Rather, as I had every reason to expect from past experience, the announcement was met with enthusiasm. Though the posted quotas said nothing about a contest, nothing about competition, it wasn't necessary; not to Americans. Right away every man in the outfit, from the commander down to the lowliest DP with a sack of coal on his back (who knew that the more sacks of coal he hauled the better his chances for a big cigarette prize) was rarin' to go.

Days like these gave my chairborne commandos in CALTF headquarters a chance to get out on the line and do some flying themselves. Though the increased quotas meant hard work, they also meant stimulation, enthusiasm, the thrill of accomplishment. Before long we were all caught up in the exuberance of the mission. As soon as we'd gotten off to a good start, I flew on into Berlin to watch the planes come in. Standing in the ground-control approach office at Tempelhof listening to the pilots sing out as they came in, I could tell—anybody could tell—that something special was going on. The more stolid British frequently expressed astonishment at the haphazard and carefree way with which our pilots announced themselves, but today was the best of all.

Plane No. 5555, known as the "Cheerful Earful" because of the variety of ways in which its pilot liked to identify himself, was in rare form. Sometimes No. 5555 was "Four Nickels," sometimes "Four Fevers."

For the Easter Parade, he piped out loud and clear, "Here comes Small Change on the Range."

And 77, who frequently referred to himself as a bundle from heaven, today gave it the full treatment. "Here comes 77, a bundle from heaven," the pilot chirped, "with a cargo of coal for the daily goal."

I shuttled back and forth between Berlin and the bases, applying a needle here, a pat on the back there. At Celle, one of the two bases in the British Zone with a large number of C-54's, the boys were carrying on their constant feud with Fassberg, the other base, with a determination even greater than usual. The base was running 12 per cent ahead of its quota. It was long after midnight before I arrived at Fassberg. Things were really humming. Connie Bennett was down on the flight line with a group of other wives serving coffee and doughnuts. Her husband, Jack Coulter, came up to me with a big grin. He was running 10 per cent ahead of the quota, he told me proudly.

"That's fine," I said, "but of course it's not up to what they're doing over at Celle. They're really on the ball over there."

The grin vanished from Coulter's face, and he turned abruptly to charge back to the flight line and crack his whip. I took over the ownership of that grin, and headed back to headquarters at Wiesbaden. Dawn was breaking when I reached my office, I tried to get a few winks of sleep on the office bunk, but it was hard to stay down so I shaved and went to the cafeteria for breakfast. Then I got the latest word: We had already hit ten thousand tons, with several hours yet to go. Every unit was running well ahead of its special quota, and the weather was improving.

By midmorning we were no longer able to keep the secret, and I certainly didn't care. General Clay sent congratulations on whatever it was we were doing, and wanted to know what that was. I sent word back that it was an Easter present for Berlin. Any member of the press corps who hadn't smelled something in the air already got the official word from Clay's headquarters, and the correspondents descended on us in droves. We were nearing the twenty-third and twenty-fourth hour of solid work now, but you'd have never known it; the thrill of accomplishment was more powerful than fatigue. And finally the noon hour drew near, and the Easter Parade would soon be over. Time for only one more plane. Someone toted up the final score and ran out to the plane with a paint brush and a bucket of red paint.

TONS:	12,941
FLIGHTS:	1,398

And then he ducked against the blast of wind as the pilot, with just a few seconds to get into the air, gunned his engines and headed for the runway. Just under thirteen thousand tons of coal! We'd come close to averaging one round trip for every one of the 1,440 minutes in the day. The Army Transportation Officer, Colonel Bill Bunker, put it another way. "You guys have hauled the equivalent of six hundred cars of coal into Berlin today," he said. "Have you ever seen a fifty-car coal train? Well, you've just equaled twelve of them."

In the entire daily operation, we had not had one accident, not one injury. In all the glory of the achievement, flying safety had remained paramount.

I thought of the people of Berlin, still getting by on short rations, often getting up in the middle of the night to cook if that was when their four hours of electricity a day was allotted them, and what this extra coal would mean to them. All over Berlin, I knew, the people knew something big was going on. Those big planes, thundering in at a quicker beat than ever before, without cessation for twenty-four hours, would be the subject of every conversation in Berlin that Sunday. My skin prickled with pride at the role my men had played in this great demonstration of generous power on the part of our free nations.

It was that day, that Easter Sunday, I'm sure, that broke the back of the Berlin blockade. From then on we never fell below nine thousand tons a day; the land blockade was pointless. A month later, May 21, 1949, the Soviets grudgingly reached the same conclusion and ended it. Surface traffic began to move. We continued the Airlift at more or less full capacity for three more months, building up a stockpile of reserves in the city just in case the Soviets might start the blockade again, and then gradually began to let down. By September 1, it was all over. In a total of 276,926 flights, the Airlift had hauled 2,323,067 tons into Berlin. The cost? The official estimate was $300,000,000 for the American contribution, but I strongly questioned that figure; I thought it too high. The cost per ton would be roughly $150. I protested. I felt we had been doing an efficient job, and considering in addition that our operations were all military, working at the usual low pay scale, and the cargo handlers and loaders were Germans working sixty to eighty hours per

week for little more than their meals, a more reasonable figure should be placed on the operation. In answer to my protests, Washington reported that the cost of training and running the school at Great Falls and reopening the depots in Burtonwood and the United States all had to be included. I was still not satisfied. Today, with modern airplanes, large and easy to load, fast, so that many extra trips can be made in the same time period, and trained pilots and ground personnel available, the cost might well be only twenty dollars a ton to Berlin.

Whatever the cost, the Airlift had done its job, and West Berlin was free. We had shown the world what the free nations could do.

Not too long before the blockade I had, with much indecision and fear that I might be doing the wrong thing, turned down the opportunity to become a civilian tycoon and perhaps a wealthy man. Now I was no longer tortured by doubt. The role I played in the Berlin Airlift, small as it was in comparison to the thousands of men from so many nations who contributed so much, was worth far more than any success I might have had as a civilian airline operator. The international recognition was unduly flattering. I was awarded the Distinguished Service Medal by General Vandenberg, who referred to the Airlift as the "Air Force's Number One Achievement." The Air Force Association awarded me and the men of the Airlift its annual General H. H. Arnold trophy, "Aviation Men of the Year." I enjoyed a personal visit with Their Majesties, King George VI and Queen Elizabeth of Great Britain, and went through the fascinating ceremony shared by few other foreigners. This consisted of a military review of my Airlift officers and men, British and Americans, at Buckingham Palace by the King and Queen, then a parade from the Palace down the Strand to the Guild Hall for formal dinner with speeches and eulogies and all the color and pomp that the British do so very well. Later I was awarded the order of The Companion of the Bath by the RAF's Air Chief Marshal Tedder. The people of Berlin have tendered their appreciation on several formal occasions. As an American Air Force officer, however, specializing in air transport, I was most grateful for the opportunity to prove once again that we could carry anything anywhere anytime, and in so proving could help maintain the freedom of a gallant people.

Fifteen years have gone by since the Berlin Airlift, and during that time I have been asked on many occasions if we could do it all over again

today. My answer is Yes! In spite of the fact, the questioner persists, that the Russians now have powerful jamming stations in Berlin which can render our radar ineffective? My answer is still in the affirmative. And then the question comes, "How?"

It really could be done with little difficulty. We would use the plane which was conceived on the Berlin Airlift, the C-124, with its capacity of twenty-five tons. We would need one hundred planes in all, with eighty flying the route and twenty in the maintenance pipeline. We would use only two bases in West Germany, both in what was once known as the British Zone, located near the central corridor. We would use only one airfield in Berlin, and because it has the most unobstructed approaches, this field would be Tegel. The total flying time per trip would be one hour in, one hour out, and we would plan on an eight-hour utilization per plane per day. This would give us four trips a day, for a total of one hundred tons per plane. The eight-thousand-ton total would really be more than sufficient, as there is on hand in Berlin today a stockpile of more than one year's supply of coal.

But all this, those familiar with our extensive use of radio and radar in '48 and '49 will say, does not take into consideration the possibility that the Soviets could jam our communications. Ah, but it does. This schedule could be maintained with no radio, no radar at all. Aviation antedates both. What we would use instead is one good navigator per plane. We can fly the entire route at an altitude of five hundred feet; the terrain is as flat as a landing field. In good weather we'd step up the schedule; in bad, we'd lengthen the intervals to twenty minutes, thus eliminating any danger of collision. We'd use, basically, the same method we used before: A rigid order of procedure based on controls, speed, and split-second timing. The pilot would take off and head for Berlin at a speed and heading so precise that he might as well be on a conveyor belt. Once over Berlin at five hundred feet, the pilot would simply land at Tegel if he could see the field, if not, he would turn down the other corridor for home base. In short, we could have the Berlin Airlift going again in a matter of hours, and, thanks to the bigger planes we now have, maintain it with fewer problems and greater success.

CHAPTER VI

Korea

IT WAS broad daylight when we sighted Shemya, far out in the Aleutian Islands. I caught the eye of my pilot, Major Tom Collins, and gave him the old sign of reassurance, thumb and forefinger pressed together. From here on, all the way to Kodiak Island, we'd be over the Aleutian Islands and a constant chain of wartime airfields. The weather was good, visibility fine; I could see a hundred miles ahead. Our fuel supply was holding up. Just a few hours before, back in Tokyo, I had told Tom to make out a clearance for Kodiak, Alaska, thirty-five hundred miles away. He'd gulped, gone off, and done some figuring, then had come back to say that from Tokyo to Kodiak, if all went well, was a seventeen-hour flight. He paused and then added, "And you know, sir, we can only carry seventeen and a half hours of fuel."

"Yes," I'd said, "I know how much fuel we carry. We're still going to Kodiak."

Tom was my aide as well as my pilot, Ray Towne copilot. Both were gray with fatigue.

Tom loved to fly. While a fighter pilot in England, he asked for as many extra tours as he could get. He had well over 160 fighter missions over hostile territory, and received twenty-four air medals.

We'd been flying for days and had a lot more ahead of us, but right now everything was perfect. Our constant check on the fuel gauges seemed almost superfluous as the airfields slid by below. Old 5549 roared on over the Aleutians in clear weather, and we came down at Kodiak with a half hour's fuel still left in the tank—a sixteen hour and fifty-five minute flight.

Kodiak is a naval installation, and I hurried to check in with the base commander, an admiral.

"I'd appreciate it if we could get gassed up as soon as possible," I said after we shook hands. "We're flying direct to Washington, and I'd like to take off right away."

"Washington? Direct?" he asked, as though it were some far-off exotic land. "How in the world are you going to fly direct to Washington in that plane?"

"The great circle route," I said, "across Canada and straight on down."

"I never heard of anybody going that way before," he said.

"Neither did I," I said.

We got some sandwiches and hot coffee, and the tanks filled, and were on our way again in an hour and a half. I spelled Tom and Ray at the wheel so that they could each get a few hours sleep as we bored our little hole through the sky on across the great expanse of Northern Canada, then down over the Great Lakes. Over Pittsburgh we lost an engine. We feathered the prop and made a careful check of the other three engines. Each was performing perfectly, and as our normal gas consumption had lightened the plane considerably, I saw no point in stopping for a new engine, especially with bright, clear weather. We limped on and landed at Andrews Field, just outside Washington, this time a seventeen hour and thirty-five minute flight but just in time for me to get in to see General Vandenberg, Chief of Staff of the United States Air Force, before the day was over.

It was perhaps typical of the Korean War, that strange and tragic faraway conflict, that I began my personal, direct involvement in it by flying from Tokyo to Washington in two hops—in the wrong direction.

After Berlin, I had come back to Washington to report back to my old job as Deputy Commander of Operations of MATS under Larry Kuter. That fall and winter, 1949–50, was an unhappy period for America, for the military establishment, for the Air Force, and for me. Louis Johnson was then our Secretary of Defense, and he was proceeding ruthlessly with his openly announced determination to reduce the military budget. I sat in meeting after meeting in which General Joseph McNarney, known as the Secretary's hatchet man, questioned the representatives of our various commands on what they were doing to save money and, in particular, why certain bases and activities were still in operation. As a result of these hearings, the Air Force was forced to

close down many of its main bases over the world. As Operations Officer of MATS I saw our rate of utilization drop off to 2.8 hours per day per airplane, with but one crew per plane. A civilian airline, by comparison, operates its planes eight to twelve hours a day, and maintains three crews or more per plane—the sensible, economic way to get the most out of these multimillion dollar pieces of equipment.

Despite the severe reduction in the military budget, it was necessary to continue training what troops we had left. A full-scale maneuver called "Swarmer," with emphasis on the employment of airborne troops, was scheduled for April of 1950. General Lauris Norstad, Chief of Operations of the Air Force, was commander-in-chief of the Swarmer exercise, and asked for me as his air deputy. There was a great deal of hard work and detailed planning involved, but we were all enthused with the opportunity to help develop the new military science of airborne operations. My experience in working closely with the Army during my two years at Fort Benning proved to be both useful and stimulating. Thus the long hours spent on Swarmer were pleasant and productive ones, particularly in contrast to participation in the gutting of our military machine which was then taking place in Washington.

After the maneuvers were over and we had made a thorough analysis of the lessons learned, Larry Kuter suggested that Larry Norstad and I make an inspection in Alaska, with a chance of a bit of fishing on the side, as a reward for our efforts. A few days later Norstad and I found ourselves happily ensconced on the shores of a beautiful little lake practically running over with fish. It was quiet and peaceful. We didn't even have a radio.

One day we heard the sound of an airplane and a little amphibian came in over the treetops, landed on our beautiful lake, and taxied up to shore. Out of it stepped General Nathan F. Twining, then commander of our forces in Alaska. He didn't even ask us about the fishing.

"They want you two down at the Pentagon," he said. "Haven't you heard about the war?"

"War?" Larry and I said.

"Yes, war," Nate said. "In Korea. It's time you guys got back to work."

"Let's get out of here!" Larry said, and we packed our gear and hurried back to our respective desks.

Mobilizing for war is always an all-out activity, but in the United States in the summer of 1950 those of us in the military establishment were particularly hard pressed. Personnel, equipment, and facilities had just been drastically cut; now we were attempting to reverse that trend and accelerate at the same time. Our utilization rate per plane had been slashed—we hadn't even had the money to buy gas for adequate flying time; now we faced the long uphill struggle to build the rate up again. Critically important bases had been closed, abandoned, or placed in caretaker status; now we had to reopen them. The base at Tripoli, I recall, had been closed just three days, with its equipment piled in great stacks on the wharves awaiting shipment, when the order came down to open it up again.

We had released management personnel, pilots, and mechanics as well as supply clerks and cooks from the service, and now we had to find them and bring them back to active duty, along with new men who had to be trained. It was impossible to augment our skeleton forces fast enough to enable the Air Force to carry supplies and troops to Japan, our staging area in the Far East, and we had to turn to the airline industry for help. Only a few of the major airlines—Pan-Am, Northwest, United—were in a position to furnish aircraft and crews to fly troops and supplies across the Pacific as contract carriers, but we found many small airlines anxious and satisfactory so ended up contracting with ten altogether. We set up one airlift along the northern route, by way of Seattle, Anchorage, the Aleutians, and thence down to Japan and Tokyo, another along the central route, via Hawaii, Midway, and Wake Island.

As soon as it was possible for me to get away from Washington, I set out in No. 5549 on an inspection trip of our big Pacific airlifts in order to check up on both private contractors and the military operation. In addition to my crew of Collins, Towne, an extra pilot, a navigator, a mechanic, and a radio operator, I also took Eddie Guilbert, Pete Fernandez, and Orval McMahon. We went out on the northern route, stopping over at each base, and although we saw a little petty chiseling, we were on the whole well satisfied with the performance of the civilian carriers, and particularly gratified with the progress made in reopening the Aleutian chain of bases.

When we arrived in Tokyo, I naturally dropped in on my old friend from the Hump days, Lieutenant General George E. Stratemeyer, com-

mander of the Far Eastern Air Forces (FEAF). He greeted me with some surprise.

"Well," he said, "you certainly got here in a hurry."

"Why, no, sir," I said. "I stopped in at several places along the route to see how the airlift was going."

"Oh," he said. "Just two days ago I asked for you to be assigned here. I thought that's why you'd come. Well, anyway, you're here now, so you might as well start working."

"But, General Stratemeyer," I said in consternation. "I only planned to be away from home a couple of weeks. I've got two kids back home in care of a temporary housekeeper. I must report to Larry Kuter about this trip. I'd like to take a couple of days and get back and straighten everything out."

"You can't get to the States and back here in two days," he growled. "It would take you more like two weeks. I've got a big job for you here."

"What's the job?" I asked.

"All I'll tell you now is that you'll be in command of all air transport and troop carrier operations, and that you'll have considerably more aircraft to work with than are here today. I'll tell you the rest when you're ready to go to work. I'll give you five days."

That's when I got in touch with Tom Collins to tell him we were flying from Tokyo to Washington with one en-route stop in a C-54. As far as I know, it was the first such flight.

In Washington, General Vandenberg received me cordially. "I've gone along with Stratty's request to send you over there," he said, "but frankly, Bill, it's going to be a short-time job. I don't think it will last more than a couple of months at the most."

Even though, at the time, the North Koreans had swept down the peninsula, and the American and Republic of Korea forces held only a small area in the southeast around Pusan, the optimism shown by Vandenberg was general throughout the entire military establishment. Sure, the Reds had caught us by surprise, but now that the might of the United States was committed to the support of South Korea, along with the majority of the United Nations, the thinking was that we were going to get this little two-bit war over with in a hurry. An all-out offensive under General Douglas MacArthur, Commander in Chief of both United

States and United Nations forces in the Far East, would begin any day now.

"I'm going to send over all the troop carriers we have to help you out," Vandenberg went on. "There'll be about 250 planes, mostly C-119's. You already have a group of C-54's over there, plus a group of C-46's and a large number of C-47's. I think you'll have enough equipment to do the job."

"Thank you, sir," I said. "I don't know exactly what the job is yet, but I appreciate your help."

No matter what my mission would turn out to be, I knew I'd need men I could trust to help me with it, and I set about signing them up. Bob Hogg and Harold Sims were the first two I called, and then, of course, Red Forman, who was assigned in Europe. For my chief-of-staff I chose Colonel Glenn Birchard, a steady, dependable, and intelligent officer I'd found on the Berlin Airlift. I didn't give them much time to say good-by to their families, but that was the price good men must pay. For such a short stint it was not difficult to make arrangements for the care of my boys, Bill and Joe.

I was a little apprehensive about the large number of C-119's I was going to have. This was the big Fairchild Flying Boxcar that had evolved from the C-82 we'd used on the Berlin Airlift. It was a good plane, but still new, and all the bugs hadn't been worked out. I called George Hatcher, an ATC colonel in World War II, who had served with me before and who was now an engineer with the Fairchild Aviation Company. He knew the intricacies of this big plane, and I asked him if he would care to come back on active duty as my engineering officer. That way he would be right there as the bugs developed. He accepted the opportunity eagerly, and I had his orders cut immediately.

Stratemeyer had given me five days. I was back in Tokyo at the end of four, complete with staff and ready to go to work. He beamed when I entered his office.

"Well, you didn't waste any time," he said, "and neither will I. Here, take a look at this map, and I'll show you what your job is. As you know, our forces have been driven back to this area here, the Pusan perimeter. We've only got about one-fifth of what we once had in South Korea. But now we're getting ready to move. We've got a new Marine Division, and the 187th Airborne Regiment of the 101st Airborne Divi-

sion, a bunch of paratroopers looking for a fight, is en route to the theater right now. Now you see here on the west coast of Korea the port of Inchon, and just inland the capital city of Seoul. MacArthur's plan is to make an end run by sea and air around the peninsula, make an amphibious and airborne assault, capture Inchon and Seoul, cut off all the enemy forces to the south, and wrap up this whole war in a hurry. Your job is air supply and the paratroopers. To do it we're setting up a brand-new command for you, the Combat Cargo Command. Good luck."

Headquarters of the Combat Cargo Command, or CCC, would be located at Ashiya, on the island of Kyushu in southern Japan, across the Tsushima Strait from Pusan. My command, and the Fifth Air Force under Lieutenant General Earle E. "Pat" Partridge, would be parallel commands, each reporting directly to General Stratemeyer. I knew Pat Partridge well, and had the greatest respect for him as a tactical air commander, but I had certainly learned by this time that tactical air people just don't understand air transport. With both of us going our separate ways, answerable only to Stratemeyer, I had every hope that Partridge and I would get along fine.

From the beginning, the organization and mission of air transport in Korea benefited from our experience of the past. Of primary importance, all transport planes were placed under one command. This was not effected without overcoming some misconceptions. The Army felt that the planes used for the occasional paratrooper drop should be at Army disposal all the rest of the time, too; this was the way it had always been. The Marines and Navy wanted their separate air transport fleet, and so did the Fifth Air Force. Prying these aircraft loose from the organizations to which they were already assigned was not accomplished overnight, but I was persistent. When the protestations ended, I had the planes—all of them.

On my recommendation the responsibility for the allocation of airlift tonnage to the using services was assigned to a Far East Command Air Priority Board in Tokyo. After this determination was made, the Joint Airlift Control (JALCO) in Ashiya decided exactly what was to be moved, in what priority, and to whom. Thus the CCC's responsibility was not to allocate, but to deliver tonnage, not to determine what was to be carried, what the Army and Navy and Air wanted within their

tonnage allocation, but to deliver their requirements, regardless. This was just and proper.

To determine priorities for the Inchon operation, a large conference was called, attended by the G-3 (Plans and Operations) and G-4 (Supply) of the Fifth Air Force, Army, Navy, Marine Corps, and me. Eddie Guilbert and Orval McMahon attended the conference with me. We were all in agreement that the first and most important job of the CCC would be to pick up the 187th Airborne Regiment in southern Japan and drop the paratroopers on their objective, the Kimpo Airfield between Inchon and Seoul. We would also, of course, have to resupply them by air, and these supplies would be brought to the area by two methods. As a part of the over-all plan, the Eighth Army would fight its way out of the perimeter in the south and proceed overland to the new front. It would bring its initial supplies with it, by truck and train; this would necessitate the repair of road and railroad as the Army moved along. The bulk of supplies, however, would be brought in by sea and unloaded in the harbor at Inchon. The ships were already loaded. The Fifth Air Force, having anticipated that we would have our hands full with the 187th, had arranged to follow the same dichotomous plan as the Army. It would move the supplies it had on hand overland from its bases within the Pusan perimeter, but would bring in the greater part by sea. As in the case of the Army, these supplies had already been placed on board ships. The Marines, through the very nature of their normal mission, had no need of, and had made no arrangements for, long-range supply. Marines, like paratroopers, are designed to hit hard and fast, and for this job their supply requirements are relatively modest. It is the Army ground forces, whose mission it is to push on out from the initial objective, which need the great masses of supplies.

Thus, for the Inchon invasion, the major efforts of the Combat Cargo Command were concentrated on the dropping of the 187th. When the daring operation began, we were ready. In the meantime, the Marines stormed ashore on their first objective, the island of Wolmi-do which dominates the harbor, and took it in a total elapsed time of forty-seven minutes at a cost of twenty Marines wounded. General MacArthur, seeing the American flag go up over Wolmi from his deck chair on the *Mount McKinley,* was elated. He sent a message to Vice Admiral Arthur

Struble, commanding the assault, saying: "The Navy and Marines have never shone more brightly than this morning."

The beach landings continued. Inchon fell, and the Marines fanned out toward Kimpo and Seoul. Before we could drop the 187th on Kimpo Airfield, the Marines had taken it. The only thing to do now with these superlative, expensively trained paratroopers was to fly them to Kimpo, land them there, and send them into combat as regular infantry. The revised plan had two major advantages. First, of course, the troops would be landed as a cohesive unit, all walking off the planes at one point rather than jumping out over a large area. Second, if air-landed, it could go into battle with all of its impedimenta of some five thousand tons, including trucks and heavy weapons, rather than the five-hundred-odd tons of selected equipment to which the regiment would be restricted by an air-drop operation. We had more than enough planes for the job.

As soon as the Kimpo field was open, our planes took off. I was in the first flight of C-54's; I wanted to take a look at the field. As a straight line between Ashiya and Inchon crossed over both enemy-held territory and over naval vessels with orders to shoot down anything overhead, we followed a carefully laid-out route around the peninsula and up the Yellow Sea to Inchon.

When I looked down at the harbor of Inchon, I could hardly believe my eyes. It was a mud flat. Only one narrow channel led into the loading docks. I later learned the incredible situation that obtained there. There is a thirty-one-foot tide at Inchon, and when the tide is out, there simply is no harbor. Though lighters were available, most of the ships unloaded at Inchon proceeded through a dredged channel into a lock basin with a single lock capable of accommodating only one ship at a time—and it takes a full day to unload a big freighter. So it was that when I flew over the harbor, I saw this mighty convoy of hundreds of ships lying at anchor all over the great bay waiting to discharge their cargo. On those ships were military supplies of every description—ammunition, gasoline, heavy weapons, vehicles and tanks, rations and medical supplies. In addition, on those ships were loaded almost the complete supplies of the Fifth Air Force—POL products, bombs, napalm and ammunition, as well as spare parts and maintenance items. And it was all being unloaded at the rate of one ship per day in the lock basin, plus those undergoing the tedious process of transshipment to lighters. I was

to fly over the mud flats at Inchon many times during the next few weeks, and the number of ships in the harbor seemed to decrease very slowly. As a matter of fact, two months after the Inchon landing, the Army G-4 sent most of them back to Japan or Pusan to be unloaded.

But on that first trip over Inchon, headed for the recently seized airfield, I did not fully realize the enormity of the supply problem. The pilot brought the plane in low over Inchon, then proceeded northeast to Kimpo. On the field, bodies of North Korean soldiers lay almost in windrows. Just before, I learned, the Reds had attempted to mount a counterattack to recapture the field. They had poured onto the field by the hundreds, while the Marines mowed them down in a crossfire from automatic weapons. There were so many bodies that their removal was a major problem.

As our C-119's disgorged their paratroopers, Marine fighter planes began coming in. The commander of the Marine Wing, Major General Field Harris, and I got together and talked the situation over. The Marine regiments were smashing toward Seoul in a magnificent two-pronged advance, with Harris' fighters flying close tactical support. He was using up all his POL and ammunition, and his reserve supplies were at sea.

"You have the priority. I can bring in all you want, right now," I told him. In two seconds I had a customer. As arrangements had already been made to supply the Marine ground troops, the Far East Air Force's Combat Cargo Command was now airlifting supplies for practically the entire Marine operation in Korea, and for one paratroop regiment.

We soon had the operation going full tilt at Kimpo, with planes coming in every two minutes, unloading, and getting out of there fast to make the return trip. I set up quarters in the plane and stayed at Kimpo for several days. As usual I had a good, capable young staff at Ashiya, and I knew they were holding down the store back there. I wanted to be up where I could find out firsthand what was expected of us. I could see both the Marine Division and the Marine Air Wing working, and get their requirements firsthand. Pete Fernandez had rigged up a two-way teletype system between our portion of the field at Kimpo and Ashiya, and whatever the Marines hollered for—more gasoline, more bombs, more ammunition—we could get it on the way to them immediately. In the meantime the supplies of the Eighth Army, the X Corps, and in

particular the Fifth Air Force, were either en route over the twisting, war-damaged road and railroad from the south, or sitting in the harbor.

Fortunately, the Inchon landing was a success which redounded to the credit of General MacArthur. But it was a success in spite of the fact that a careful evaluation of all problems which might be faced at Inchon had not been made. The combination of the loading conditions in the harbor and the almost impossible condition of the road up from Pusan resulted in our troops ashore being forced to fight while great supplies of everything that they needed were still in ships in the harbor. Many critical items were brought in by air transport, yet the logistics experts had planned only minor utilization of it.

The Inchon landing is one of history's most glaring examples of the use of air transport as a corrector of logistic mistakes. Air transport is frequently used as such, and some degree can be tolerated as it is human to make mistakes. But it should be constantly borne in mind that the primary use of air transport should be to airlift critical, scarce, and expensive items routinely and to make stockpiling of all except very common items unnecessary. It has become too easy for the logistic experts, when they suddenly discover that the situation has changed, or that they've made a mistake or forgotten something, to put in a hurry-up call for air transport. At Inchon, fortunately, we were available.

After the liberation of Seoul, MacArthur set in motion his plans for the advance into North Korea. The Eighth Army would continue up the western side of the peninsula toward Pyongyang, the Communist capital. The X Corps, composed of the Seventh Infantry Division and the First Marine Division, would be pulled out of Seoul and shipped around the peninsula by sea to land at the North Korean port of Wonsan on the east coast. A joint task force of some 250 ships was assembled to carry the First Marine Division on this amphibious assault. The Seventh Division was to come in later.

There was some grumbling about this lengthy and complicated maneuver. One objection was that the removal of these two divisions from the fighting at this particular and critical period would delay effective pursuit of the fleeing North Korean Army, perhaps even to the extent that it might get away entirely. The Navy took a pessimistic outlook of the operation because the harbor at Wonsan was known to be heavily mined; the North Koreans were able to sow mine fields most effectively by the

simple expedient of putting the mines in the rivers and letting them float down to the sea.

Instead of this unwieldy amphibious operation, the Eighth Army staff proposed that the two divisions proceed overland across Korea to Wonsan. This would of course entail the crossing of much rugged terrain over mountain trails. There was no question but that the overland movement would be exhausting, and would take its toll in equipment, as had been learned in the march up from Pusan.

To us in the CCC the solution was obvious: airlift. From the complex of airfields in the Seoul area to Wonsan was less than thirty minutes by air. We had planes, crews, and organization. Compared to some of the movements of entire Chinese armies we had made on the same continent just five years before, in World War II, delivering two divisions a mere hundred miles would be but a mild exercise in air transport. We had C-54's for personnel and such supplies as ammunition, rations, and gasoline, and the big C-119's in which we could carry guns, trucks, tanks, and the heavy equipment. I proposed to General Stratemeyer that we volunteer our services for the Wonsan operation. He pointed out that we now had the joint commitment to help our Fifth Air Force and the Eighth Army on the west coast, and declined to request the job. We didn't have enough airlift to do *all* these jobs! We had sufficient planes, but not sufficient personnel—crews, maintenance men, and other ground-support people. But had we been ordered, the CCC could have moved the entire Marine division and all of its equipment, except heavy tanks, to Wonsan in five days.

As it was, the Seventh Division, which was to follow the Marines in, was sent by road southwest to Pusan, a distance over twice that from Seoul to Wonsan, and there boarded ships for the trip up the east coast. In the meantime the Marines had embarked at Seoul and were on their way around the peninsula. All available mine sweepers in the Far East were Wonsan-bound. Squadrons of Navy planes from aircraft carriers were dropping tons of bombs in the harbor in an effort to detonate the mines. When the mine sweepers arrived, they worked day and night; four struck mines themselves.

As the mine-sweeping activities continued, the transports carrying the Marines were unable to enter the harbor and instead steamed back and

forth in the Tongjoson Bay off Wonsan. Their passengers referred to the whole thing bitterly as "Operation Yo-Yo."

While the Marines were en route, I sent a light plane over the Wonsan area on a reconnaissance mission. We knew that once the Marines landed, we would be called upon to supply them by air, and I thought it wise to look the situation over. The pilot came back to report that Wonsan had been heavily and effectively bombed by our B-29's and there was no sign of the enemy anywhere. South Korean troops (I ROK Corps) had passed by the field and kept moving. The field was suitable for landing, and our planes flew in General Edward H. Almond, commanding X Corps, and some of the advance elements of his staff. UN forces began building up in Wonsan. By October 24th, there were so many that we flew Bob Hope and his troupe into Wonsan to entertain them, and two days later the Marines finally stormed ashore. Though it was the Marines whose faces were red, they were by no means responsible for the events leading to their discomfiture. We could have had them in Wonsan a week before.

While Operation Yo-Yo was going on off the east coast, furious fighting and exciting events were taking place in the west, north of Seoul. As the Eighth Army battered down the North Korean resistance before Pyongyang, the CCC was in the thick of it. Most of the Army vehicular equipment had seen service down in the Pusan-Taegu area, and had been brought up over the narrow rough and rocky road. It was pretty well shot.

But ammo and gas and rations had to be gotten to the forward echelons some way, and the wounded had to be evacuated. Airlift was the answer. We flew supplies in, flew the wounded out; our crews worked to the point of exhaustion. As soon as a field would be uncovered by advancing forces, we'd be using it. I recall one such airdrome, a big grass field of about fifty acres, at Sinmak, between Seoul and Pyongyang. Troops were still fighting at the northern end of the field when I landed at the other end in a C-54. We had received word from the Army G-4 that this particular unit was in dire need of small-arms ammunition and gasoline for its tanks. Harking back to the days on the Hump, we had brought along a large tire in addition to the gas. The planes had hardly come to a stop before crew members had yanked open the cargo doors and thrown out the tire. With the engines still turning over, the crew

chief, radio operator, copilot and I untied the drums of gasoline, rolled them to the door, and kicked them out on the big tire on the ground beneath.

Suddenly tanks—American tanks—began streaming toward us from all directions. A tank would come grinding up, stick its portable pump nozzle down into a drum of gasoline, suck it dry, and then roar on back to the fight. A group of wounded men were waiting patiently in line, and after the gasoline and ammunition had been unloaded, the stretcher cases were carried on and the walking wounded helped up into the plane. Then we slammed the doors shut, the pilot poured on the coal, and we took off. Our pilot made a steep climbing turn to avoid the enemy small-arms fire off the far end of the field, and we headed back with our load of wounded men for more gasoline and ammo.

When the Eighth Army crashed into Pyongyang, the entire North Korean Army was fleeing northward. The Army was still itching to use the 187th Airborne Regiment as paratroops. These troops, young, toughened fellows, intensively trained at great expense for the roughest possible jobs, seemed to exert a hypnotic effect on the higher echelons. In the minds of the dedicated paratroop officers, or jumping jacks, as we called them, the question was never *whether* to jump, but *when* to jump. Here at last what seemed to be a reasonable employment for these superb troops presented itself. Dropping the regiment at the crossroads of the towns of Sukchon and Sunchon some thirty miles north of Pyongyang would seal off the major escape routes, trap the fleeing enemy, and perhaps effect the rescue of Communist-held prisoners of war.

Colonel W. S. Bowen, commanding the regiment, and my staff worked out the details of the jump to the most miniscule degree. Kimpo would be our base of operations. The transports, C-119's and C-47's, would take off and group into formation over the field. They would proceed on a course almost due west over the Yellow Sea to a floating radio beacon in the guise of a Japanese fishing vessel which Pete Fernandez had procured and outfitted for just this mission. There the planes would turn on a heading almost due north to a point southwest of the drop zone, where the formation would turn to the northeast and come in over the coastline. In this way we hoped to avoid observation and anti-aircraft fire as well as to minimize the possibility of attack by the Russian-built fighter planes we occasionally saw over North Korea.

We knew that General MacArthur was personally interested in the airborne assault. So was General Stratemeyer. So was General Partridge, whose fighters would precede the paratroopers and soften up the area for them and also provide the vitally important top cover for our planes. And so was I.

H-Hour was set at 0800, October 20. The field was packed with planes. Colonel Bowen and his regiment were ready. There were seventy-one C-119's, each of which would transport sixty-five paratroopers to the jump area, and forty C-47's, all ready. Partridge's fighters were ready, their pilots itching to go. I had my own plane there, too, of course; it was set up as my office, complete with radio and telephone. With me were Tom Collins, as pilot, Red Forman, copilot, Pete Fernandez acting as radio operator, and Ray Towne. We were ready.

Back in Japan, at Itazuke, General MacArthur sat in his personal plane, a Lockheed Constellation, with General Stratemeyer at his side. Two men—eight stars. They were ready.

But the weather was not ready, not at Kimpo. A heavy overcast came right down to the field. To send all our planes up into that murk would be to court disaster. The entire operation was paralyzed. We did not know the extent to which the clouds reached over our heads, nor how far they reached laterally. As far as we knew, the weather was just as bad over the drop zone; the North Koreans were not forwarding weather information to us. All we could do was wait and hope for clearing skies. And that's what we did—paratroopers, fighter pilots, transport crews, and generals. At least the generals had something to do. Back at Itazuke the weather was clear and perfect, and every half hour General Stratemeyer called me at Kimpo to ask what in the hell we were waiting for. All I could do was tell him that the fog and the clouds were still there. I could not blow them away.

About noon Stratemeyer called and said he was considering canceling the entire operation. But at that moment there seemed to be a slight lightening in the clouds over us at Kimpo.

"Wait a few more minutes, General," I said. "I think I can get off the ground myself now. I'll go up and take a look around."

There was certainly no danger of collision with any other plane up above; with the entire Far East Air Force sitting on the ground old 5549 would be the only plane in the sky. As for coming back, if we couldn't

get in to Kimpo we could simply keep going and land at a field in Japan. As Stratemeyer had pointed out to me every half hour, the weather was fine over there.

With Tom Collins at the controls, we took off and spiraled up into the clouds over Kimpo. The plane broke into the clear at five thousand feet.

"Follow the route," I told Tom. A lone plane in the sky, I was a bit edgy. I kept pacing up and down, pausing every second or so to peer through a window at the clouds below. They seemed to be scattering. I strode up to the cockpit. Up ahead they were definitely breaking up. In a few more minutes we could all see that it was completely clear ahead, with ceiling and visibility unlimited. We still had not reached the first beacon.

Skies continued clear on the northern leg of the course. We turned in toward the enemy-held coast. The suspense was gripping. We all peered ahead until our eyes ached. We proceeded on until we were just short of the coastline. We could see Sukchon clearly, and it was bright and clear on toward Sunchong. There was no further question. Both were clear, completely clear, bathed in the autumn sun. Collins swung 5549 around and headed back to Kimpo. As soon as we were well out to sea again and I felt it safe to break radio silence, I called in. Our code word was "No sweat," which was ironic; both Pete Fernandez, who transmitted the message, and I were dripping with it. He modified the code word in conformance with actual conditions.

"No sweat left," he began. The message went to my command post, thence to Colonel Edgar Hampton, commander of the Air Force Task Force in charge of the drop. The gist of the message was that the route was completely clear after breaking out of the overcast over Kimpo. I advised that his planes take off singly, climb to five thousand feet, and then proceed on planned course to the island of Tok-chok-do right off the coast. There he would find clear skies. His planes could rendezvous there, form into formation, and proceed as planned. I would be back in thirty minutes, I concluded, and would repeat these orders to him in person. I wanted him to get started on the final preparations, but I also wanted to make double-damn' sure he understood me before taking off.

We came in through the overcast, landed, and I hurried to Hampton's command post. He was busy with the final details. I repeated my in-

structions, but this proved to be unnecessary, as he had understood me perfectly. Fighters and light bombers of Partridge's Fifth Air Force based at Taegu were already airborne, on the way to seek out and destroy enemy strongpoints in the drop zones. The C-119's began taking off, one by one, proceeding to the rendezvous point where Mustangs would pick them up and convoy them to the area. MacArthur and Stratemeyer, back in Japan, were given full details. I stayed at Kimpo long enough to make sure that everything was under control, then took to the air again. Flying directly over the troop carriers, I was in a position to observe them fully and at the same time stay out of their way. We flew along with them to the drop area. The 111 planes, flying in precise formation, made a beautiful sight. At 1400 hours over Sukchon, the planes suddenly blossomed, and white petals fell to earth. Just a few moments later the same scene was repeated over Sunchon. We put the troopers down exactly where they wanted to be, in drop zones only a mile long by a half mile wide. Within one hour we delivered 2,860 men and over 301 tons of equipment, including jeeps and artillery. After the nerve-racking delay of five hours, I didn't think we had done so badly.

Midway during the operation I happened to look up, and there, overhead, was MacArthur's Connie with Stratemeyer, staff members, and a group of war correspondents aboard. Suddenly the big ship headed north over enemy-held territory and was soon out of sight. I learned later that the commander-in-chief had decided to take a look at the Yalu River.

Down below the fighting paratroopers were carrying out their share of the operation with great success. So sudden and unexpected was the assault that many enemy positions were found deserted, with guns and ammunition, discarded by the fleeing soldiers, lying around. Heavy opposition was met in some areas, but they nevertheless secured the high ground around the jump areas and started expanding their positions.

I remained over the area until the last plane had cleared, then proceeded to Pyongyang. MacArthur had returned from the Yalu to fly over the smoking North Korean capital, and when he saw a couple of American planes on the airfield there, he insisted upon going down. I had been planning to put an advanced headquarters at Pyongyang and thought there'd be no better time to find facilities for it, so I told Tom Collins to take us down, too.

By the time I landed, Lieutenant General Walton H. Walker, commanding the Eighth Army, had reported the fall of Pyongyang. Word had come in from the drop area to the effect that all was going well. General MacArthur was elated. As I approached him, he held out his hand, gripped mine, and pulled me to him in a rough, hearty gesture.

"Congratulations, Tunner," he said. "I am awarding you the Distinguished Service Cross."

Operations north of Pyongyang continued successful. First an ROK division by-passed Pyongyang to link up with the 187th; then the First Cavalry Division broke through north of the city. In three days of operations the 187th was credited with the killing or capturing of six thousand North Koreans. Many thousands more were cut off and were eventually killed or captured. Large stores of winter clothing and ammunition were taken.

And now three columns of United Nations Forces were pushing pell-mell to the Manchurian border. Many of us now thought that we would wind this whole thing up by Christmas. Though our hopes were to prove tragically false, and our forces in Korea were due to suffer a frozen hell of horror and defeat, this brief interlude may well serve to examine and assess the many lessons we had learned in just a few weeks in the unique and peculiar military operation that was Korea.

At the time we did not fully realize that the Combat Cargo Command was bringing about a new concept in the science of ground warfare. Later, General "Iron Mike" O'Daniel, commander of I Corps, was to say: "The Airlift to Korea is one of the greatest developments of this war. It gives a commander advantages he has never had in wars before."

No military force in history had ever moved farther, faster, than the Eighth Army in its drive from the Pusan perimeter to the Yalu. Not even the lightning drive of General George S. Patton's Third Army across France in World War II equaled the Eighth Army's progress in Korea. The very speed of its movement produced a shock effect among the defending enemy forces, which in turn enabled the Eighth Army to proceed even faster.

Though many factors were involved, including the outstanding military performance of the ground forces, air transport was nevertheless the primary new addition to the science of warfare which made this swift advance possible. The railroad was out, and roads, poor to begin

with, were almost impassable; it took six days for the round trip from Seoul to Pyongyang. Both the river leading to Pyongyang and the harbor at Chinnampo were mined. Air transport was all that was left. Thus, in this drive up the west coast, the Eighth Army was largely supplied by air. This one deviation in the normal conduct of war brought about sweeping changes in many phases of combat operations. Air transport, bringing products and ammunition to tanks at roadside fields, enabled our armored columns to keep pushing forward. Long supply lines were unnecessary; air drops supplied platoons, companies, even battalions with everything they needed to make war. There was no need to go back, only forward. There was no need to protect depots. Through air evacuation, the advancing forces were unburdened of their wounded. So swiftly did the ground forces move that our engineers were hard put to keep up with them. We needed desperately to repair and expand the existing airdrome facilities at Sinanju, near the Chongchon River, for example, but we did not have the engineers and the equipment for the job. I remembered what we had done in somewhat similar situations in China and India during World War II, and in Berlin during the Airlift. We rounded up two thousand North Korean civilians and through sheer manpower got the field in shape.

Though a few tons of food and equipment were dropped to troops in the Pusan perimeter early in the Korean engagement, these drops represented little refinement in technique over the first few operations in World War II. They were usually performed from a C-47. Materiel was packaged as carefully as possible with whatever was available. As the plane came over the drop zone, the pilot would give his signal, and the men in the back would start heaving the boxes through the open door. Sometimes the pilot would have to make several passes over the area before the men could get all the cargo out. Each pass usually meant exposure to enemy ground troops, and we lost both men and planes. Planes were constantly returning with bullet holes.

Several factors combined in the fall of 1950 to change the air dropping of supplies from a haphazard stunt to a precise military science. One was the Flying Boxcar, with its large capacity and open rear end, which enabled the "kickers," as the unloading crew was called, to unload the entire cargo in just one pass over the drop zone. Another was the organization and subsequent arrival in Japan of the 2348th Quarter-

master Airborne Air Supply and Packaging Company. These were the parachute-packing experts. Their first big job was the resupply of the 187th Regiment at Sukchon-Sunchon. In the three hundred tons of supplies and equipment dropped the first day were not only such items as ammunition and rations, but vehicles, field artillery, howitzers, and antitank guns. Vehicles were dropped with gas tanks full: cut on the ignition, kick the starter, and you were off. The whole operation was so well organized that on the second day, after six hundred tons of equipment had been dropped, a thirty-man recovery detail parachuted into the area to collect parachutes and other specialized equipment used in the drop.

From then on, the Command was constantly called upon for air drops. Although combat conditions made many of these drops necessary, they were quite costly. Cargo to be dropped had to be carefully and stoutly packaged and tied to bulky parachutes. Only a small portion of the weight-carrying capacity of the planes could be used. Packages would sometimes break on landing or parachutes would occasionally malfunction; then also, on account of the aim and timing of the crew, some cargo always seemed to drop into enemy hands. As it was, the preparation of cargo for air drop and the packing of parachutes resulted in a manpower problem. As in India and China, then Germany, I turned to the residents of the country in which we were operating for help. We broadcast an appeal for workers over the local radio stations, and the Japanese workers' response was immediate. They were efficient and loyal laborers, and most of them quickly learned to handle jobs of increasing technical skill. Standout workers were awarded badges resembling paratroopers' wings. They knocked themselves out for the privilege of wearing those badges.

Another military development of the Korean War was full-scale air evacuation of the wounded. We had pioneered medical air evacuation back in the days of the ATC; this "major miracle of the war," as one correspondent called it, was developed to its fullest extent in Korea. Dr. Elmer Henderson, president of the American Medical Association, after a trip to both front lines and rear-echelon medical installations, called air evacuation the most important medical development of the war. Despite the appalling sanitary conditions in Korea, through air evacuation the death rate of wounded troops was cut to half of what it had been in World War II. Through air evacuation we were able to

spare our wounded many of the tortuous and torturing stages by which they were moved to the rear in former wars; the number of DOA's—men found dead on arrival at rear installations—was reduced to almost none. Many of the intermediate hospital installations in which, in former times, doctors and nurses were called upon to perform major surgery under field conditions, were eliminated. In Korea our medical air evacuation experts, they themselves representing a new form of medical science, worked out methods by which the wounded could be given preliminary attention in field hospitals, or even simple first aid by the roadside, and then flown back to permanent and completely equipped hospitals in South Korea, Japan, or even the United States.

Though surely the system of medical evacuation evolved in Korea makes sense, as well as demonstrating some compassion for the wounded, even here there was resistance. A year before air transport had been officially recognized by the Secretary of Defense as the primary method for transoceanic movements of military patients. MATS had been flying Korean war casualties from Japan to the United States from the beginning. However, intratheater movement of military patients by air was not only not utilized to any extent but was actually opposed. The medical evacuation system then in effect was based upon the Army philosophy of deliberately keeping casualties close to the front in order to get those whose wounds proved minor back into combat. Standard operating procedure called for the wounded to be brought to the battalion aid station by litter-bearers, then moved back through regimental and division medical installations. At any of these points, as the casualty recovered, he could be returned to his unit. From division he could be sent to a field hospital for emergency surgery or for a short period of convalescence, or to an evacuation hospital if in need of prolonged treatment or major surgery.

When I arrived in Korea, our forces were still bottled up in the Pusan perimeter. Two out of every three wounded men evacuated to the rear were trucked to Taegu, whence they made the rough overnight journey by rail to Pusan. There they either remained in the crowded hospital, or, for the most part, were loaded on board ship and brought to Japan. The actual percentage of patients brought to Japan by air through September 15 was less than 30 per cent. We had planes return-

ing empty from Korea all this time. We could easily have brought back most of the patients from Taegu, all from Pusan.

On the day I took command of the newly formed Cargo Combat Command, I named Lieutenant Colonel Allen D. Smith, commander of the 801st Medical Air Evacuation Squadron, as surgeon of the CCC and directed him and my staff to consider seriously the full possibilities of aeromedical evacuation. Smith leaped at the chance to serve our country's casualties and began working out methods by which the hitherto catch-as-catch-can methods of evacuation by surface means could be developed into a scheduled and reliable air-transport system. The most common method was to assign nurses, medical technicians, and apparatus to Korea-bound cargo planes, which could then pick up aeromedical patients. As the system became standardized, it was utilized more and more. By the end of October, twenty-five thousand patients had been moved by airlift. Interest was further being shown in the use of helicopters, by which casualties could be evacuated from the front lines. Thus in Korea was set in motion a reversal of the basic military concept, to which our Air Force medical officers were opposed, that wounded men should be kept close to the front.

"The farther and faster the wounded are removed from the combat area," Colonel Smith stated flatly after observing air evacuation for some period of time, "the better, more efficient, and more economical will be the medical care." They could be as quickly returned to the front if wounds proved to be minor.

Air evacuation excited a great deal of interest among correspondents and observers visiting Korea. I recall that General Carl Spaatz, the former Chief of Staff of the United States Air Force, asked several questions pertaining to air evacuation at a special briefing given him at Ashiya in late September. One of his questions was whether planes should be designed and built especially for aeromedical evacuation, and have a large Red Cross, thus becoming a non-combatant airplane. I replied that I did not think so. We did not have enough planes, and air space was always at a premium, and thus the planes we had must serve the double purpose of taking in supplies and bringing out casualties. In modern war, the Red Cross could not always be seen.

Methods were being worked out to increase the comfort of the medical passengers on cargo planes, and any discomfort suffered in air

evacuation was still easier to take than the uncomfortable journeys of surface evacuation.

Though I did not recommend any changes in the C-54's which we were using for medical evacuation, I did consider it necessary that fall to suggest modifications in the C-119. When I first heard that the Air Force planned to purchase several hundred more C-119's, each with additional paradrop equipment built in, I immediately sat down and wrote a long letter to Larry Norstad pointing out my objections.

At the time, although the plane did have a few bugs, particularly in the propeller, it was working out well as the medium transport workhorse of the USAF. What I objected to was the extra weight being built into every plane to make it usable for paratroop and air-drop operations. This extra weight lay primarily in the overhead bar to which the parachute ripcords were attached, and the heavy structural bracing necessary to support that bar. This equipment was necessary in the dropping of personnel and supplies, of course, but it did not have to be built into every C-119 purchased. At that time, big paratroop operations occurred once every sixty days at the maximum. The plane was not idle the other fifty-nine days. By the end of November, the CCC's C-119's had flown some six thousand sorties, only 228 of which had carried paratroops. The extra weight permanently installed in each C-119 thus resulted, in the aggregate, of thousands of tons of cargo vitally needed in Korea remaining in Japan.

As for the air drop of equipment and supplies, a letter before me from my successor in Korea gives the figure of an accrued total of 160,000 tons air-landed in Korea during the first six months of our operation, with only 10,000 tons dropped.

A proportion of this tonnage was vitally important to our forces in Korea, but it does not follow that every plane should be loaded with the extra weight of air-drop equipment. We air-dropped a very small percentage, air-landed a very large percentage, yet our planes were designed for the former at the expense of the latter. The tail was wagging the dog! Obviously the plane should be designed for the mission it does normally, and improvised for the air drop, not vice versa, as was actually the case. Twenty per cent of our total fleet of C-119's equipped for air drop would have been more than sufficient.

"I am almost reconciled to believe that we will never be able to afford

all the transport lift that we will require," I wrote Larry. "It seems extremely foolish to me to deliberately throw away the terrific potential inherently available in this aircraft."

While I was at it, I also threw in my standard objection to a two-engine military transport plane. We were always being called upon to wring the last ounce of possible payload out of any plane. Under these overload conditions, a twin-engined aircraft isn't capable of safe operation in case of engine failure. (Editor's note: With current FAA rules two-engine transports must have ample take-off performance with one engine dead.) I could not help but resort to a comparison of this plane built after the war, with all the available engineering knowledge amassed during the war, with the wonderful old C-54, built years before wartime engineering. This trustworthy ship, with a gross weight of only seventy thousand pounds, could carry a ten-ton load with utmost dependability. And here was a new postwar plane, with a gross weight of 71,500 pounds, carrying an eight-ton load.

My protestations came to naught in this instance. Although I lost that battle, however, I have hopes that I eventually won the war; today I understand that the Air Force is ordering planes of which only a reasonable percentage have this heavy equipment built in.

Though, thanks to the understanding of General Stratemeyer, I had been able to set up my own separate command answerable directly to him, some of the old administrative problems suffered on the Hump and in Berlin continued to be a nuisance.

On the Berlin Airlift I had been hamstrung through lack of administrative and logistical control of my own command. In Korea, on an operational level, the CCC was parallel to the Fifth Air Force, but we were once again dependent upon the tactical air force for such items as maintenance, supplies, and housing. Once again it was brought home to us that operational control is far from enough. You must have overall control to operate efficiently. My staff was frequently called upon to produce miracles, and, God bless them, they delivered. Orval McMahon, the former supply sergeant who was my chief of supply at CCC, knew all the tricks of that tricky trade. On one occasion, when we were low in POL supplies and the Fifth Air Force seemed in no hurry to share theirs with us, Orval located an entire train of POL products

and diverted it to us at Ashiya. It takes a good supply man to steal a whole train.

The only item Orval ever had trouble procuring was a personal one. As a result of an accident in his youth, he had one glass eye. It, like his good eye, was bright blue in color. When he went to bed, it was his habit to remove the glass eye and place it gently on a piece of Kleenex on his bedside table. One evening he retired with a bad cold and a whole box of tissues. Next morning Orval, a neat and sanitary man, gathered up the used Kleenex and proceeded to flush it down the toilet. Too late he realized that he was also flushing away his glass eye; it gazed at him reproachfully as it disappeared forever. For a top-notch supply man unused to coming back empty-handed, Orval had a particularly frustrating period trying to locate a replacement in Japan. There were plenty of glass eyes, but not for Orval. For have you ever seen a blue-eyed Japanese?

As was the case in every other airlift I commanded, the Korean Airlift had its own newspaper. Ray Towne, my imaginative public information officer, was editor. At the beginning Ray was not provided with the office space he felt necessary for this journalistic venture. He looked around and found a private residence, comfortable and spacious. Its only drawback was that it was already inhabited—by a sergeant, his wife, mother-in-law, and eight children. The sergeant was due for a transfer back home, but with transportation as tight as it was it looked as though he'd be in Japan for the duration. But my staff officers stuck together. Ray spoke a few words to Eddie Guilbert, our traffic officer, and presto! space became available immediately for the sergeant and his brood. As they moved out, Ray moved in, and had his press center in operation that day.

During that autumn of 1950, many of us, from the Pentagon to Pyongyang, were living in a sort of fool's paradise. Though the nights had begun to be a bit nippy, the days were still balmy and mild. Though our troops had crossed the thirty-eighth parallel and were penetrating into North Korea, this in itself did not mean too much; the thirty-eighth parallel, after all, is just sixty miles south of the Pentagon, and the winters there can be unpleasant, but not impossible. As for the enemy, the resistance of the North Koreans was crumbling completely, and our troops were penetrating through the rugged mountain country of

North Korea with comparative ease. In late October, a force of Chinese suddenly materialized to clobber a ROK division, but they disappeared again, and MacArthur's intelligence staff remained unperturbed. Plans were being made to send some units home.

I was ready to join them. Fatherhood is no mission to be carried on from a distance. One morning, when I was leaving headquarters, a messenger ran after me with a cable from Taft School, where my older boy, Bill, was enrolled. BILL HAS BROKEN NECK, the cable read. PLEASE WIRE INSTRUCTIONS.

Later I learned that a few key words had been lost in transmission. Bill had not broken his neck, but his shoulder near the neck. Recommended treatment involved an operation, for which parental consent was required. At the time, however, knowing none of this, I could only cable that I hoped they'd do what was best. I had just gotten this message off and was hurrying out to the plane again when here came another cable, this time from Washington, where Joe was living with friends. He had acute appendicitis—immediate surgery recommended. Again I answered to do what was best. I probably could have done little more for either boy had I been home, but at least they'd have known their only parent was closer to them.

In the temporary normalcy that followed, the hectic days of the two-pronged advance we were ordered by FEAF—over my objections—to cut plane utilization back to a maximum of three hours per day per plane. Although I didn't like it, there was some reason for the order; Stratemeyer's staff was concerned over the real possibility that we would use up our spare parts and be immobilized for the lack of them. There was no question but that our inventory was very low; in the pre-Korea economy wave the Air Force had not been able to maintain it. The penny-wise practice when purchasing an aircraft had been to buy along with it only enough spare parts to maintain a maximum flying time of two to three hours per day. Nor were spare parts yet streaming off the assembly lines back home. The entire United States was being re-geared to furnish supplies of all kinds for the Korean War. Still, my staff and I believed that we should continue to perform our mission to the best of our ability and deliver everything that was asked of us; it was up to the Pentagon to exert greater effort to get us what was needed.

About this time Major General Charles L. Bolte, Chief of Operations

for the United States Army and one of the nation's top military men, came to Korea on an inspection trip. As he ruefully related to me later, one of his primary sources of information turned out to be his own son, fighting far up in the mountains of North Korea.

The boy must have chewed his father out, but good. "It's a goddamn' shame that with all the wealth and comfort there is in the United States we have to be up here in northern Korea without winter clothes, without blankets, without adequate food, and not even enough ammunition," he raged. According to Bolte, his son was absolutely furious, and obviously with good reason. On the way home with his son's protestations still ringing in his ears, Bolte saw my airfields full of planes, standing silent and unused. He stormed in to see me at my headquarters in Ashiya.

"Jesus Christ, Bill," he said, "why aren't you flying in supplies to those men? They're up there fighting and dying and freezing, and you're sitting here doing nothing."

I explained the situation as best I could. In addition to the prohibition which kept us from flying more than three hours per plane per day, I also pointed out that there was a severe shortage of maintenance men and ground crews as well as flight crews. "These airplanes are capable of flying three times as much as they are being flown today." I told him. "Get me the men and the parts, and authority to use them and I'll get your supplies to Korea."

Bolte heard me out and then flew to Supreme Headquarters in Tokyo, where he began pushing buttons right and left. I have in front of me an official communication from Bolte dated November 8, 1950; it came down to me from General Stratemeyer, to whom it came down from General Vandenberg in the Pentagon, to whom it came down from even higher authority. It read, in part:

> I Corps operating with one day of fire on hand. One and one-half days of POL and three to four days of Class 1 (Food and clothing). Walker says could not improve situation due to long haul. Tunner hauling 1000 tons daily but could double with more flight crews and maintenance men. In meantime planes stand idle.

That woke up somebody. Winter clothing and the other necessary equipment suddenly materialized. Orders came down from General

Vandenberg overriding the restriction on utilization of equipment. With great pleasure I threw the CCC into high gear again. We delivered winter clothing and equipment to small airfields throughout Korea, and air-dropped tons more to advance elements now approaching the Yalu.

Winter in Korea, we were learning fast, is not the same as winter along the thirty-eighth parallel in other parts of the globe, with the possible exception of the Colorado Rockies. The cold air mass piling up over the great frozen areas of upper Siberia and the Arctic Ocean spills down upon Manchuria and Korea in the winter. To those men in North Korea the cold was particularly bitter and penetrating. The advance elements had been driving themselves relentlessly for weeks, burning every ounce of fat off their bodies. Their field rations didn't provide the high amounts of calories they needed in subfreezing, often subzero temperatures. The woolen uniforms and socks, blankets and overcoats, the shoes and galoshes, the parkas and gloves, all these, in addition to increased food rations, must have made existence in those frozen, barren hills at least a little easier for our troops fighting there.

And then came the Chinese. Today we know that troops from Red China had begun to slip across the Yalu River as early as October 14. By the end of the month, four Chinese armies were in Korea, proceeding unseen down along the mountain backbone of the peninsula in night marches to their preplanned points of ambush. These were highly trained, well-disciplined soldiers with the benefit of a generation of experience in guerrilla warfare. Their mission was to destroy the United Nations forces in Korea.

In some respects we had made this mission particularly easy for them. Between the Eighth Army on the left, the Marines in the Chosin Reservoir area in the center, and the Seventh Division on the right were wide gaps. The Chinese used these avenues to work their way to superior positions, outflanking our troops. Then they struck. Wearing white uniforms invisible against the new snow, the eerie wail of their bugles echoing off the stark mountainsides, the hordes of Chinese poured down upon our troops. The ROK Second Corps collapsed, enabling the Chinese to make a deep penetration to the south, then turn west to strike at the flank of the Eighth Army. To the east, the white-clad soldiers of the Chinese Ninth Field Army, twelve divisions of them, filtered between regiments of our First Marine Division and the Seventh

Infantry Division. Some Seventh Infantry units were completely annihilated, and remnants of others worked their way west, toward the Chosin plateau and the Marines.

This wild, desolate area around the large, man-made lake of the Chosin Reservoir was accessible on the ground by only one road, the narrow track twisting through the rugged mountains to the city of Hungnam on the coast. The Chinese cut it in a dozen places, isolating units all along it. The two advanced Marine regiments, in desperate and gallant actions, fought their way back to one central point, the tiny mountain village of Hagaru, or Hagaru-ri. ("Ri" simply means village.) There, completely surrounded by the enemy, they consolidated and prepared to fight their way out.

Shortly after midnight on the first day of December, I was awakened by an officer courier bringing a handwritten message from Colonel Hoyt Prindle, my liaison officer with Lieutenant General Edward M. Almond's X Corps. My eyes skipped hurriedly down the hastily scribbled lines.

> I am in General Almond's outer office and waiting to get in to see him. I attended briefings both last night and this morning . . . The situation at and near the Chosin Reservoir is critical. We must exert every possible effort to airdrop supplies and ammunition into that area in order to get the 1st Marine Division out or we will be lost.
>
> There are already between 900 and 1000 casualties that urgently need air evacuation now. If we don't get them out, they won't get out.
>
> A 3,200-foot strip being hacked out of the frozen earth will be ready by 4 p.m. this afternoon. It may or may not be under enemy fire. We will have to take that chance. If usable it will help the air evacuation situation and also re-supply the unit that is near the strip. The support of others must be handled by air drop . . .
>
> The 7th Marine Regiment and other units are going to fight their way out during the next two or three days. There are roughly ten Chinese Red divisions closing in on the area. In a few more days it will be too late. The roads to this area are cut in a number of places and everyone will have to fight his way out . . .
>
> Everyone here is in over his head . . . There is little need to fly in supplies here, except those urgently needed to be airdropped . . . Some critical items like hand grenades . . .

10:30. I just came out of Almond's office and he asked me to express to you in the strongest terms the urgency of the situation in the Chosin Reservoir area. Re-supply of those units will have priority over all other requests.

The general plan is to withdraw from all directions including the Manchurian border and the Chosin area to form a perimeter around Hamhung. Concentrate on the perimeter around Hamhung and Hungnam and bring the Marines out and the 7th Division and X Corps headquarters, put them on boats and get them out of the whole area . . .

I attempted to get through some kind of a telephone call a few minutes ago but there is no connection except by third person relay . . . I will have to send an officer back to brief you today. There is a woeful lack of information here on what lifts in the form of drops can be expected, what specific missions can be expected . . .

This was written in a hurry so I would like to repeat—*the drop situation and the relief of the 1st Marine Division is most urgent.* It is a C-47 operation entirely from the way I look at it and if we are able to air land into the strip which is located one mile south of the southern end of the reservoir.

Fortunately my staff and I were all together in a rough but adequate house on the base. I sent the duty officer around pulling everybody out of bed. After that he was to start locating and alerting C-47's. I got my clothes and went down to the little dining room; it would serve as our conference room. Red Forman came running in, buttoning his shirt.

"Here's a job for you, Red," I said. "You're in command. Get going." As he was getting underway, I called FEAF, got General Strat out of bed up in Tokyo, and told him of the situation at Chosin.

"I am going to move every C-47 I've got up there," I said. "I think it would also be wise if we put two squadrons of C-119's up there, too, to do air drops of ammunition, clothes, and anything else they need."

"Go ahead and do anything you think best," Strat said without hesitation.

Within one hour from the time I was awakened, every C-47 in Japan and Korea was ready to go, complete with crew. The C-119's were next. I didn't know exactly what was needed in the Chosin area, but it seemed a pretty safe bet that the troops could use winter equipment, rations,

small arms, and ammo. By noontime the C-119's were over the fighting area, seeking out isolated Marine and Seventh Division units fighting their way back into Hagaru, and dropping them supplies.

The C-47's were loaded with supplies too, but the strip was now ready, and they could be unloaded on the ground. The first pilots I talked to said that the strip was only twenty-five hundred feet long, not thirty-two hundred, but it was possible to land there. It was at Hagaru-ri, where the headquarters of the Marine Division was located. Men had worked round the clock, using searchlights at night and often under enemy fire, to scrape it out of the frozen earth.

Though Red was running the show efficiently, it was my job to be where the big effort was. My first stop was Yonpo Airfield, near Hamhung. This was our transfer point. C-47's were shuttling back and forth from Yonpo to the strip at Hagaru, C-54's back and forth from Yonpo to Japan. At Yonpo I saw the wounded being taken from the C-47's and placed in the C-54's. Within two hours they would be warm and comfortable in the big base hospitals in Japan.

I hopped aboard a C-47 loaded with ammo and bound for Hagaru. It was only a few minutes' flight, but as I looked down at the narrow road, twisting and turning through the ugly, rugged mountains, I could see that on the ground the same trip would take hours, even days. Every yard was a good place for an ambush. We flew over a saddleback ridge and there beneath us was the tiny village of Koto-ri. A regiment of Marines was holding on down there. Ahead of us lay the narrow valley leading to Hagaru. Below us now were Chinese. I saw an American convoy on the road beneath us, but as we passed over it, I could see that the vehicles sat motionless, shot up and burned. The convoy had been ambushed.

Then came Hagaru. I saw the strip immediately. It was on the east, right-hand side of the valley coming in, along the side of the ridge. We couldn't overshoot it, that was for sure, as it ran into a mountain in the north. I told the pilot to circle the field once so I could look it over. I doubt if he approved of the order, as he had flown in before and knew that Chinese troops were all around the field, popping away at our planes with small-arms fire, but he carried it out without hesitation.

In the center of the strip I could see a small parking area where three planes sat, their noses right across the runway. There was no room for

more. As we circled, one of the planes pulled out and took off to make room for us. To the left of the strip were the tents of the Marines, and a few thatched huts. There was a narrow strip of ground to the left of that, and then the mountains. As we came in for the landing, I saw machine-gun emplacements at the south end of the field. Until we reached them, we were over no-man's land. As we came down, we were within range of the Chinese positions on the ridge. Several planes came back to Yonpo with bullet holes in the fuselage and wings, but if the Chinese were shooting at us as we came in, or later, on taking off, I wasn't aware of it. My pilot gave them as little opportunity as possible. Once he had circled the field, he came down fast. We hit hard.

The first sight that met my eyes as we pulled in the tight little space were the wounded men, waiting patiently to be loaded on board and flown over the mountains away from this place. Some were on litters, some on crutches. Behind the wounded a tent flap had been erected. Under it were long rows of what appeared to be round mattresses. They were the dead, each corpse placed in a mattress cover, which was then tied around the top. Frozen stiff, the bodies were stacked like logs. They, too, were flown out of Hagaru.

From the hills all around came the sound of war, the crack of carbines, the heavier sound of the M-1, and the big noise of mortars and artillery. From behind every ridge, I knew, the enemy was watching.

On the way to the headquarters of Major General Oliver P. Smith, commander of the First Marine Division, I heard a roar overhead and looked up to see a procession of C-119's come in, dropping supplies in the strip between the tent area and the mountains. The parachutes were of several different colors—yellow, white, green, blue, red—each color indicating the contents of the package to which it was attached. They were pretty against the gray winter sky. One of the chutes failed to open, and the package came whistling down to land with a bang on the frozen earth. General Smith must have heard it, too, for the first thing he said to me when I entered his tent was a complaint about the chutes not opening. Two of his Marines had been hit and killed by these missiles. All I could say was that we tried our utmost to keep the failures down, and had a very low percentage.

"It looks like you can hold your perimeter all right," I said then. "Now here's what I can do. I can take out all your wounded. I can bring

you all the warm clothes you need, all the ammunition and POL supplies and food. Now, can you get out of here O.K.?"

"No," he said. "The road is out on both sides of us, and the bridges are knocked out between here and the coast. It's going to be rough."

"Do you want me to fly you out?" I asked. "I believe I can get most of your people out, and maybe some of your small vehicles."

"Thanks," he said, "I'll need the whole fighting division to get everybody out—there are hundreds of our men up ahead, too. But you take out these sick and frostbitten and wounded."

But Smith could not begin his epic march to the sea immediately. He had to hold his position until all the stragglers had come in and all the wounded had been flown out.

Back at the strip, I watched for a few minutes the swift and efficient operation there. The moment an incoming plane would come to a stop, both crew and Marines would pitch in to unload it. Then the wounded, waiting there in the bitter cold with dignity and patience, would be placed aboard. From the fellows on the strip I learned that some of my pilots, carried away with the importance of the mission and acting with the best of motives, had been seriously overloading their planes. There were stories of pilots permitting thirty-five, even forty wounded men on board. One pilot claimed to have flown out forty-two.

This was downright silly. In this thin air and with this short runway, the reasonable limit would be thirty. To attempt to take off with more men than that aboard would be risking the lives of the crew as well as those men who, already wounded at least once, had surely suffered enough. I laid the law down flatly that there were to be no more cowboyish capers. We were there to rescue the wounded, thirty at a time, not to show off at the risk of adding to the number of casualties.

As it was, we lost two planes at Hagaru, but we did not lose a man. One pilot couldn't get his plane up—it was not overloaded—and it crashed at the end of the runway. Miraculously, no one was injured. The other plane developed engine trouble while still on the ground. Both were destroyed to keep them from falling into the hands of the enemy.

The operation continued for six days, until there were no wounded left at Hagaru; we evacuated a total of 4,689 casualties. We even flew out hundreds of Chinese Communist prisoners. Some of them had crawled into the camp on elbows and knees, their hands and feet frozen.

Even after all the wounded were safe, however, the Marines still could not move out of the Chosin plateau. Smith led his men through the most bitter fighting, the six miles of hell to Koto-ri, but there he was stopped again. Four miles south of Koto-ri the road crossed over a narrow gorge, fifteen hundred feet deep. The Chinese had destroyed the bridge. Smith took me up on my promise to do everything I could to aid him; he requested a bridge. Nor, for this particular engineering problem, would just any bridge do. He specifically requested eight spans of an M-2 treadway bridge, complete with plywood planking. Four spans would be enough to do the job, but he asked for eight to make sure. If he'd wanted sixteen, I would have attempted to get them to him.

Landing in that area was out of the question; the spans would have to be dropped. We flew in specialists from Japan to Yonpo to package the huge spans; when prepared for the drop, each weighed two tons. One trial drop was made with six personnel parachutes. They could not hold the span, and it was damaged beyond repair on landing. There was no more time for further experimentation. For the real drop, two huge parachutes, each forty-eight feet in diameter, were secured to each span, one at each end. They were loaded on rollers, one to a plane, along with a crew of kickers. At an altitude of only eight hundred feet over the designated area the kickers pushed the heavy spans out. The huge chutes took hold. One span was dropped over enemy-held territory, and another was damaged, but six arrived in perfect condition. The bridge was built, and Smith's Marines and the remnants of the Seventh Division marched and drove their vehicles across it. Twenty thousand men fought their way out to safety.

The Combat Cargo Command was busy on the west side of the Korean peninsula too during those hectic days. Although the situation there was not marked by the desperation caused by the encirclement at Hagaru-ri, it was nevertheless critical. On December 5, the Eighth Army suddenly decided to empty every military hospital in Korea lest the wounded fall into the hands of the advancing Chinese. On that day, C-54's of the 801st Medical Air Evacuation Squadron evacuated more than four thousand patients to the safety of Japan.

After my visit with General Smith I flew back to Yonpo, and from there proceeded across the peninsula to our Sinanju airfield on the west coast. Eddie Guilbert was there. A helicopter flew me to I Corps head-

quarters, and then on to Division headquarters. I wanted to get the feel of the operation. I intended to proceed on to Tokyo, and I wanted to be able to give a clear report on the situation.

At the division level I found confusion and a severe shortage of supplies, but no panic. The feeling was that the Chinese were rolling down upon us in great waves of manpower. We could mow them down if we had sufficient guns and ammunition—but we *didn't* have sufficient guns and ammunition. At Corps I was told the story of the commander of a field artillery battery overlooking a narrow valley leading down out of the mountains. The captain called in excitedly over the field telephone to say that a Chinese force was proceeding in mobs down the valley. He opened fire, and called in to report that he could see his shells landing in their midst. Still they came, and still the slaughter continued. The captain kept up a running, excited, blow-by-blow account. And then, suddenly, the line went dead. The entire battery had simply been engulfed.

No one had time to pass on to higher headquarters what he needed. What were the requirements, I asked, and the answer was: *Everything*—particularly rations, ammunition, and warm clothing. From Corps headquarters I flew to headquarters of the Eighth Army at Pyongyang, and went in to see General Walker. He looked tense, incredulous; the way you'd expect an American general about to order a retreat to look. I thought of my planes ordered by MacArthur to assist in the evacuation of the X Corps from Hungnam; I thought of the planes moving elements of the Fifth Air Force from Yonpo back to Taegu. There was little airlift left for Walker.

"We have considerably more airlift than you are getting," I admitted to him, "but it is working for Partridge and Almond. If you think your need is greater, I could ask Tokyo to assign it to you. I could bring you two thousand tons a day."

He shook his head. "No," he said, "it's too late. It looks like we're going to have to pull south."

I left his headquarters dispirited. Here we had plenty of planes, enough to do all three jobs, but not enough parts and not enough crews to utilize them to even near their full capacity. I knew that my personnel, both flight crews and maintenance crews, were driving themselves to the limit.

beyond the limit. But it wasn't enough, and because it wasn't enough, Americans were being killed by those damned Chinese.

The rules on how these planes would be used had been made months and even years before, when the parts for the planes had been originally purchased. If MATS had not been so sorely cut back during that period just prior to the war, in those months between the Berlin Airlift and Korea, we could have tripled our delivery of supplies and men to the Eighth Army. If I had had the same force in Korea that I had in the last several months of the Berlin Airlift, I could have, during the preceding month, built up the Eighth Army to sufficient strength to have held the Chinese north of the Chongchon River. Instead Americans were retreating and dying.

These planes were good planes, capable of ten-to-twelve-hours-a-day usage, but the parts and supplies to keep them going could not be produced from a factory overnight. The old story—economy. Further, instead of three full crews per C-119 plane, we had one. And so we were held to three hours daily usage. The real problem was with the logisticians. Few service logisticians had ever seen an airlift in combat; they did not understand its tremendous potential, its ability to replace surface transportation on the battlefield. Airlift had not been planned, either in Washington months before, when parts and crews should have been ordered, or even in Tokyo as late as August, just prior to the Inchon invasion. Now every commander wanted it, more and more of it, and it just wasn't there. The ones who wanted it the most were those who had planned for it the least.

In the ensuing military action, the First Cavalry Division, with attached English, Australian, and Turkish forces, provided a gallant and masterful delaying action all the way down that side of the peninsula, enabling the rest of the Army to pull back with some semblance of order. Now from the big base camps at Seoul, Yonpo, Inchon, and even Pyongyang, we began the evacuation of supplies, mountains of them, back within the old Pusan perimeter and even to Japan. Although these supplies were not the critical ones needed at the fronts by our slowly retiring forces, they were important for a sustained war. It was a reverse airlift, operating day and night without cessation. In addition to quantities of equipment and personnel of both Eighth Army and X Corps, we also continued the movement of the Fifth Air Force units to the comparative

safety of South Korea. Without airlift all of this equipment might well have fallen into the hands of the Chinese Communists. Its money value ran into the millions, but its military value was even greater, for if the Communists had been able to capture it, they might have pushed right on down to the end of the peninsula. As it was, when the Chinese outran their own supply lines, United Nations forces had the equipment, the supplies, and the will to turn right around and take the offensive again.

In this regard, as I reported later to General Stratemeyer, there was evidence to believe that the Eighth Army could have held longer at the Chongchon River, seventy miles south of the Yalu, or, at worst, retired in considerably better order. The primary factor influencing the decision to withdraw across the Chongchon was the knowledge that the forces there could not be supplied. Had this campaign been air-logistically planned, had we the crews and parts, we could have given them all the supplies they needed by airlift. Would the pell-mell retreat down the peninsula have then been necessary?

Over and over again, on the Hump, in Korea, I saw higher headquarters pour money, materiel, and manpower down the endless drain of construction and reparation of facilities for surface transportation when a fraction of that cost would have enabled air transport to do the same job better. To the fantastic waste of the Burma Road, which never delivered more than a trickle of the supplies to China, add all the similar expenditures in Korea—the reconstruction of entire harbors, the constant reparation of roads, the repeated cycle of rebuilding of railroads and bridges and tunnels—only to destroy them again. If but a percentage of this effort had been put into airdrome construction in Korea (with the added proviso of full utilization of our planes), instead of the thousand tons we delivered a day we could have approached the eight thousand tons we carried without difficulty into Berlin. This would have been more than adequate to furnish the supply requirements of all United Nations forces—ground and air—in Korea, even against the Chinese Communists.

Over and over again I have seen planners place all their logistic eggs in one basket—surface transportation—only to find, as at Inchon, that one underestimated obstruction, such as the thirty-one-foot tide, was slowing down the whole operation. Despite the historical success of the Ferrying Command, the Himalayan Airlift and Berlin, air transport continued to be ignored. One of the most pitifully tragic examples occurred

at Seoul during the retreat of the Eighth Army. Rumors of Chinese torture and butchery spread throughout the city. The directors of a group of orphanages in Seoul became fearful that if the children remained in the city they might be hurt or killed in the fighting, starve from lack of attention, or even be murdered by the Chinese soldiers. They made arrangements for a ship to evacuate a thousand children or more. The United States Army furnished trucks to take the children to Inchon harbor, but the boat did not appear. For days the children, many of them infants, waited in vain on the open wharves in zero weather, without adequate food, shelter, or clothing. Finally someone thought of airplanes; an appeal was made to the chaplain of the Fifth Air Force, and it was quickly passed along to me.

I ordered twelve C-54's to proceed to Kimpo immediately with flight nurses and technicians aboard. The children arrived from Inchon at about the same time, in open trucks. They were terribly undernourished and suffering from the extreme cold. Many, particularly the infants, were on the verge of death from exposure. Our people wrapped the children in blankets, and did everything they could to ease their suffering. The only food available was in the flight lunches; I'm sure that not one morsel passed the lips of Air Force personnel.

When the planes arrived at their destination, the island of Chejudo south of Korea, where arrangements had been made to receive the children, for many it was too late. But the great majority recovered. The Sixty-first Troop Carrier adopted all the children, raised money for a new orphanage, and flew in a planeload of presents and Santa Claus on Christmas Day. For most of the children the story ended happily.

If only someone had thought of airplanes sooner, it could have ended happily for all.

With the new year, the fortunes of that strange war again changed abruptly. Chinese columns streaming openly down through the peninsula made excellent targets, and the Fifth Air Force proceeded to annihilate them. On one day the Fifth's airmen estimated that they had killed eight thousand of the enemy. Now the Cargo Combat Command began returning men and material to Korea. Throughout the entire United Nations military establishment it was now clear that the Chinese had thrown their best armies at us, and though they had taken most of Korea, the price they had paid in hundreds of thousands of casualties of their

finest troops added up to a bitter defeat. Our forces assumed the offensive again, and the Chinese withdrew.

My "two or three months" in Korea had stretched into six months, six exciting and demanding months. The Combat Cargo Command was now a smoothly functioning operation. Brigadier General John P. Henebry, a young reserve officer from Chicago, had proved himself highly capable, and on February 8, 1951, I turned the command over to him. My last action was writing an eleven-page report in the form of a letter to my good friend and boss, General Stratemeyer.

In this report I reviewed the air logistics, pointing out that air transportation had proved itself to be a major element in the military operation. It had contributed substantially to the success of the Inchon landings, the Eighth Army's race from Pusan to the Yalu, the 187th Airborne Regiment's assault on Sukchon and Sunchon, the deployment of the Fifth Air Force units in the fall, the withdrawal of the Marines from the Chosin Reservoir, the withdrawal of the entire X Corps from Hamhung to Pusan, the retreat of the Eighth Army, and finally the beginning of the new advance through Suwon.

"These highlights from our operations," I said, "certainly reaffirm the tremendous role air transportation can play and, as in the present conflict, must play if a successful campaign is to be insured."

But, I continued, the vital role of air transportation is too often overlooked. In the past air transportation had been made available for logistical support by chance rather than by plan. "Air transportation must take its proper place in the military family and must be considered and planned for as necessary to support a given campaign under a given set of circumstances. It should be an integral part of the over-all transportation system. We must plan for it to do the job for which it is best suited such as evacuation of medical patients; movement of critical items of supply and equipment; fast deployment of forces; movement of all the expensive and important material to avoid wasteful stockpiling of these materials, air supply of isolated units."

Several operations in Korea pointed out the necessity for more than one type of transport aircraft to support combat operations. Without the C-47 it would have been impossible to evacuate the five thousand casualties from the Chosin Reservoir. Without the C-119, heavy equipment such as six-by-six cargo trucks and 105 mm. howitzers could not

have been moved. A long-range, heavy-lift aircraft for world-wide operations was also vital.

I recommended greater quantities of trained aviation engineers for the expansion and construction of airfields to meet air transportation requirements.

I also pointed out that had we been able to get nine hours utilization out of all of our planes, we could have done the same jobs with a third of those we actually had in use. I recommended the increase of personnel in air transport units in order to achieve a greater efficiency of operation by increasing the daily utilization of aircraft. This alone would cut the aircraft requirement in the Air Force and would reduce the ton-mile cost by a very appreciable amount.

I could not help but put in a blow for consolidation of air transport. There was not sufficient transport aircraft available to handle our total airlift requirements throughout the world, and it was clearly indicated that this condition would exist well into the future. The only way to use all available air transportation to the maximum extent possible would be by integrating all air transportation into one organization which would have the mission of standardizing equipment, units, and techniques.

These are but sketchy condensations of a few points of several elaborated upon in my report. But they should give some indication of the extent of the proving ground in combat air transportation that was Korea.

CHAPTER VII

USAFE

Sometimes, on long night flights, lulled by the sense of security that comes from the steady drone of the four powerful engines and soothed by the faint luminescence of the instrument panel, the men flying these big planes get in an introspective, philosophical mood. Many a night I've gone forward to relieve the pilot or copilot or perhaps just to visit, and have heard them discuss the same subject, the difference between air-transport pilots and combat pilots, as we flew smoothly on under the bright stars. One night the discussion was particularly interesting, for one of the men had himself been a combat pilot, and an heroic one, before coming into air transport.

"You develop a different philosophy as a transport pilot," he said. "You think of the constructive force of aviation. The transport pilot goes all over the world, and he can't help but become interested in the people of other countries, their customs, and their problems. Transport pilots are the most cosmopolitan group in the service."

These particular attributes of the transport pilot proved of great value during my tenure as commander of United States Air Forces in Europe for the four years of the command's greatest expansion, and the expansion of the Air Forces of NATO. Though this book is primarily devoted to air transport, I believe it fitting to devote a few pages here to show what can be done within a command when the staff is alert, responsive to new ideas and situations, and eager to think boldly, both as individuals and as members of the team. For certainly some of the problems we faced in USAFE did not have their solution neatly filed away in textbooks or training manuals.

Just five years after I had taken over the Berlin Airlift, under the occasionally chafing supervision of USAFE, I found myself back in

Wiesbaden as its commander. General Lauris Norstad, who was then with NATO in Europe, asked for my assignment there. Of course I was delighted—it was always such a pleasure to work for him, or with him—and then to be in Europe too would be a great challenge. When Larry commanded, he gave straightforward directions, and I can say now, years later, that never did he interfere except to give advice or to help. He knew that there were many ways to do a job, and he expected the job to be finished efficiently; the manner in which it was done, he felt, was the commander's prerogative. He had belief in those he had selected; naturally a man would work his arms off for such a boss.

The scope of the job had become enormous, far greater that I had imagined even after my extensive briefings in the Pentagon. No longer was it just the United States Air Forces occupying Germany. The name of the command itself is a misnomer; the United States Air Forces in Europe includes not only Western Europe, but also North Africa and the countries around the Mediterranean Basin, and extends through the Middle East to Saudi Arabia and on to Pakistan. In many of these countries we had large concentrations of troops and planes on several air bases.

The job of the commander and his staff, thus my primary job, was to insure the proper state of training of these troops in all their different and sometimes peculiar training requirements and to achieve and hold the maximum combat readiness of every plane, gun, missile, and man. We also had to support with supplies and equipment much of the arsenal of aircraft and guns of our NATO Allied Forces and the Mutual Defense Assistance Program (MDAP) countries, who were not part of NATO. But in all countries the same problems existed to some degree.

In every country in which we were living and working, our relationships with our hosts were far from the cordiality one might expect from our contributions to the economy of the country involved. Yet many of these countries advertised heavily in American publications, seeking tourist trade and travel. In France, for example, in one of the years I was commanding USAFE, American tourists spent $72,000,000 a year. The Air Force was spending almost double that in construction and offshore procurements, while our troops and their families were spending $65,-000,000 a year for French goods and services. In other countries it was the same story; in the United Kingdom our Air Force expenditures

totaled about $260,000,000, American tourists, $75,000,000. In all of Europe and the African areas the Air Force total was $658,000,000 spent, while the American tourists' figure was $282,000,000. Thus tourism, so highly touted and cultivated, was almost small potatoes when compared to defense spending overseas. Europe was still struggling out of the shambles and debris of the war that had ended ten years previously. This extra foreign exchange we provided went far to put them on their feet and, incidentally, to make them the booming countries most of them are today.

Despite all this, as I traveled through the many different countries comprising my command, I was constantly seeing evidence of dislike, even enmity, for us on the part of the local people. There were signs scribbled on the walls saying, "Yankee Go Home." Occasionally we'd find our tires slashed, or cars scratched or smeared with paint. Constant reports of individual fighting between airmen and the local people crossed my desk. Just walking down the street, I'd be conscious of sour looks in my direction, and frequently in stores sales people would ignore us completely. We didn't want to be where we weren't liked or wanted, yet it was imperative that we remain in Western Europe. Much of the continent was still in ruins. We were the only people with the strength and the arms to defend the free world. Still, we needed friends. We needed allies. Though there were tens of thousands of us, equipped with hundreds of the latest bombers and fighters, we were nevertheless but a small minority in the countries in which we were stationed. We needed the help of the local people, their recognition, their understanding. And I also thought that we should paint a proper picture of America for them. Those of us in our country's service should make a particular effort to show America and Americans as not merely rich and powerful, but friendly and trustworthy and likable.

I knew that I and a few staff officers could hardly come up with all the answers to these perplexing problems in a few minutes' time, so I established a community relations council at headquarters to look at the problems and work up solutions. Later a similar council was set up at each level of command, and each base had its own council. The program grew gradually through the weeks and months as it was constantly being revised and made more comprehensive. It was an evolutionary thing. It was obvious that if we were to get anywhere in Europe, we

needed good community relations, and I made it the policy of the command to strive for this goal.

We had definite problems to overcome. Our people were living in strange lands, with insufficient knowledge not only about the language of our host countries, with the exception of Great Britain, but also insufficient knowledge about the customs and traditions of the peoples with whom we were living. To some of our personnel the differences added up to a stimulant to greater understanding, but unfortunately the great majority of our people were inhibited or antagonized by these differences. Considering the sadly lacking fluency in foreign languages of most of us Americans, there was little association between my people and the local population, amongst whom we lived, other than the lower kind which occurred in the cheap bistros and beerhalls. There was none of that carefree contact which we accept without question in the United States. Ignorance of local customs resulted in occasional violations of the laws of the host countries, and the all-too-frequent violation of social conventions.

After long discussion of the problems we faced, with suggestions for their remedy tossed in, I took the bull by the horns. "What all this adds up to," I said, "is primarily a program of developing personal contact in harmonious surroundings between our people and the local people. I think that if we can only get to see each other and know each other, we will like each other. Now how are we going to go about this?"

First, we felt that it was necessary to prepare each individual as fully as possible for his role as a guest in a far-off land. Too many of our people were impatient and intolerant, many understandably so. *Why can't I get a decent house for my family to live in? Why won't the plumbing work? Why are we so overcharged for our rents in these French villages? Why can't these people speak English? Why can't they learn to drive properly—or at least fix up their roads? Why do they cling to these stupid customs?*

And so we set about preparing orientation booklets which would acquaint, at least to some degree, every man in the command with the attitudes, customs, and culture of the land in which he was stationed. Thus, to the GI's in England, our booklet pointed out that the British are "more reserved in conduct than we are. Life on a small, densely

populated island has given them an added sense of value for privacy, both their own and that of the other fellow."

In Turkey, we warned our personnel that criticism of the party in power was far more serious than simply a matter of taste—making a derogatory statement about the president of Turkey was emphatically against the law.

In Morocco, the USAFE pamphlet cautioned our personnel against such a seemingly innocent universal custom as making a favorable comment on a child to his parents. For in Morocco a great many of the people believe that it is possible to put the "evil eye" on both humans and on animals. When anyone, particularly a foreigner with blue eyes, which are unusual in Morocco, not only looks at a child but actually goes so far as to comment on what he sees, this, at least in the minds of the Moroccans, can have tragic repercussions.

In Saudi Arabia, strange as it may seem, many of our young officers and enlisted men had the opportunity to talk with princes or even the king. In some ways it is a very democratic country. Whenever I visited with the king on business pertaining to the Dhahran Air Base, or just socially, he always insisted that I bring along the officers and men of my crew. Yet it was important that local customs be observed. Men wore their hats indoors, even at table. At feasts or at quiet meals, we frequently found no eating implements of any kind, and ate with our fingers, as did our hosts—but it was important to remember to use only the right hand. Dogs should not be discussed, nor the Arab-Israeli problem. Nor should a person cross his legs, thus showing the sole of his feet to the man he was talking to.

One phase of our community relations program, therefore, was a vast educational campaign in the cultures of our host countries. And because of the natural turnover of any military service, this was a continuing program.

The use of motor vehicles was necessary to both our operations and to our personnel who lived far from their bases. In most of the countries in which our bases were located cyclists, people pushing carts, and pedestrians were far more numerous than fellow drivers. It was extremely important, therefore, for our drivers, as well as personnel and dependents in their own personal automobiles, not only to know and observe the traffic laws of the land, but to have a sympathetic understanding of

the problems of the people with whom we shared the roads. We inaugurated a traffic-accident prevention program which went further than a mere posting of the rules and regulations. Our base newspapers were exhorted to keep up with the trends in traffic safety and laws. Every vehicle licensed to an American had to undergo a thorough inspection and meet rigid safety requirements.

Perhaps the most commonsensical, down-to-earth provision of the community relations program lay in the basic field of communications. Too many of us were like the airman who came home after an extended tour in Europe to report that now he could say *please* in two foreign languages—"bitter" and "silver plate." How could we possibly get along with these people when we made so little effort to understand their language? Personally, I found that whatever country I was in, the people seemed to appreciate even my clumsiest efforts to speak with them in their own language.

But where communications between individuals are inhibited by the lack of a common language, personal contact remains primitive, community acceptance hangs in the balance, and community relations rest upon uncertain foundations.

We did not attack the language barrier with half-hearted measures. I initiated an "on-duty mandatory" language-study program for all USAFE personnel. Every officer and enlisted man in my command was required to take a course of thirty hours in the language of the country in which he was stationed. We did not believe that these few hours could do more than provide an introduction to the language—but with this amount a man could ask for a match, ask his way, read a menu, and get an inkling of what was printed in the local newspaper. And he had a beginning on which he could build if he had the mind to do so. After two years of this program, our figures showed a total of thirty-two thousand students enrolled in classes representing ten languages: German, French, Norwegian, Portuguese, Spanish, Italian, Arabic, Dutch, Greek, and Turkish. The wives were also encouraged to learn the local language, and special classes, both day and evening, were provided for them. Although I hardly became a fluent conversationalist in German, the language I myself studied inasmuch as my headquarters were in Wiesbaden, I believe that both my country and my command benefited from the few German words and phrases I was able to employ when speaking

to gatherings both large and small on official occasions. Our hosts sincerely appreciated that small effort.

We also had many children of Air Force personnel throughout the command. In 1956, for example, we had seventeen thousand children in fifty-five elementary and eight high schools, with a staff of some eight hundred teachers. Each of these pupils was studying the language of the land in which his parents were stationed; first graders would begin with twenty minutes of German, say, or French, three days a week. The instruction period increased in both frequency and duration, until a high school student was getting at least an hour a day.

Naturally, when a military institution is located near a community, problems constantly arise. Each base, as I mentioned before, had its community council, composed of such officials as the base commander, chaplain, information services officer, provost marshal, and frequently the base surgeon. These councils would meet with similar groups composed of government officials and influential leaders from the neighboring communities. At first the two groups would get together only when necessary to discuss specific problems, but, I was delighted to learn, in many localities the sessions proved to be so interesting, even enjoyable, that purely social gatherings were frequently scheduled.

The success of the community councils encouraged us to make further attempts to become a part of the community and to make friends. In Germany, German-American clubs were organized, and I gave them a new boost of support by entertaining them often in my Wiesbaden home. On most Air Force bases there was a large sprinkling of professional men—lawyers, doctors, engineers, architects. We organized professional clubs so that our medical men could meet the local doctors, our engineers, the local engineers. Rod-and-gun clubs proved especially successful. Sportsmen have a certain kinship the world over, and members of our rod-and-gun clubs soon were hunting and fishing with the local sportsmen. Our members were eager to co-operate with local conservation officials to help preserve wildlife; there were many occasions when USAFE personnel worked side by side with local foresters supplying forage for game, or stocking streams with fish. A basic function of the club, of course, was to provide its members with information on the laws and customs of the land, which were in many cases at great variance with American customs.

With encouragement from the top, soon there were clubs galore—wives' clubs, camera clubs, square-dance clubs, dramatic clubs, chess clubs. Our people met with the local people with mutual enrichment the immediate goal, and many of us got to know each other a little bit better in the process. As our familiarity grew, we began helping each other more. Many a community athletic field in Europe has been leveled by the heavy equipment usually found on an Air Force base, then used jointly and together by community and air-base teams. In some areas, USAFE units worked with the local police organizations, swapping the latest methods and equipment. Local police were overjoyed at the opportunity to use our firing ranges. Our base fire fighters got together with the local fire departments both to exchange information and to fight fires on the base or in the community. All along, we were co-operating with national governments in such widespread emergencies as that caused by the terrible winter of 1956, when icy winds and snow swept down from the Swiss Alps and covered most of Italy. The American Ambassador to Italy, Clare Boothe Luce, requested the President of the United States to provide emergency supplies for the Italian people, and USAFE promptly inaugurated an airlift to Italy. In ten days, flying in the worst conditions imaginable, the 322nd Air Division airlifted 700,000 pounds of equipment and supplies to Italy without an accident. The crews of the airlift were honored by the Italian government and were blessed by Pope Pius during a special audience at the Vatican.

Important as were these major mercy missions, however, I cannot help but believe that the daily friendly co-operation between Air Force personnel and our immediate neighbors in a dozen little ways contributed just as much to mutual trust and friendship.

Probably the most exciting example of this was on the playing fields. Unfortunately, when I took command of USAFE, we were making no use whatsoever of athletics to establish contact with the local people, either directly on the playing fields or in the stands. Though I thoroughly enjoy the fine American games of football and baseball, they served no purpose in the new community relations program, and actually tended to deprive the majority of the men from participation in athletics. Out of perhaps two or four thousand men on each base there would be a nucleus of a score or more athletes—"gladiators" would be a better term—who would do all the playing, all year round. The rest of us would sit

in the stand and eat hot dogs and drink soda pop and get fat while our gladiators entertained us on the field. And the local people, of course, being unfamiliar with our forms of athletics, couldn't have cared less.

Those of us who had spent some time in Europe knew that soccer is the great sport there, more popular than football or baseball in America. We hadn't done too well in getting Europeans to play our games, so I suggested that we try to play theirs. Even if we failed completely in making friends through soccer, or, as was more likely, we'd get the socks beaten off us, our men would still derive the benefit of exercise and recreation. In soccer everybody plays; you can play it with three on a side or twenty-three, and without expensive and complicated equipment. I noticed that the only equipment the children of Europe seemed to require was the soccer ball—no uniforms, knee guards, special shoes, or clothes. And further, you can get more exercise in five minutes in a soccer game than a right fielder gets all afternoon. My enthusiasm for soccer must not have been unique, for, given some encouragement, soon thousands of airmen were playing the game all through the command. Soccer teams from the local communities began scheduling games with teams from the bases. They did usually beat us pretty badly at first, but they were very decent about it, and the friendly get-togethers after the game frequently made up for the lopsided scores. And we did not always lose, either. All in all we had about two hundred soccer teams playing regular schedules, and the best of them played the national teams of Italy, France, Germany, the United Kingdom, Turkey, and Finland.

We were constantly entertaining groups of children at the bases, of course, particularly underprivileged kids and the forlorn, forgotten inmates of orphanages. We'd give them a picnic, then show them over the planes. Fortunately we didn't need to do all of these things by ourselves. Help was received from philanthropic organizations and even individuals. For example, Mrs. Jouett Shouse of Washington, D.C., who had a great compassion for the underprivileged children of Germany, sponsored the German Youth Association. It supported a center for some seven hundred German boys and girls on the Tempelhof Air Base, with all manner of vocational equipment. There were sewing machines and thousands of yards of cloth sent from the States, fine photographic equipment and film-processing rooms, drafting boards, woodworking equipment, kitchen equipment, and a library. For sheer recreation there

were several of the ever-popular Ping-pong tables. Youngsters whose families had at best two rooms for living found this a natural meeting place. The adult direction was the best we could afford, and I know we made many German friends through this worthy endeavor.

By far our biggest operation along these lines was the famous *Kinderlift* for the children of West Berlin. These poor kids really had it tough. The only home thousands of them knew were the barracks-like buildings occupied by scores of indigent and otherwise homeless families and individuals. These children existed without knowing the pleasures of childhood, and my heart went out to them. Their faces seemed all the same—pale from lack of sun, pinched from lack of food, wan from lack of joy. They were truly prisoners of Communism, condemned to existence in the rabbit warrens of the big city. They couldn't leave, for there was a real danger that, should any of them visit the Communist-dominated countryside around Berlin, they might be held as hostages.

One morning, among the many pieces of paper that came across my desk was the suggestion that we transport these children by plane, over the Communist territory west of the city, to homes and farms in free Germany for a vacation. I approved it immediately. German Red Cross workers rounded up the most woebegone children they could find for the beginning of the program. Doctors and nurses worked overtime giving the kids medical examinations to make sure they could stand the trip. Volunteer workers in West Germany lined up homes with both German and our own American service families where the unhappy little ones would be welcome for the vacation period. My people, of course, were lining up planes and pilots. This was to be a voluntary service, and the men came forward without prodding. We accepted only pilots with two thousand hours flight time, and even then there was a waiting list. One pilot stayed on two weeks after his tour of duty in Europe had expired in order to make a *Kinderlift* flight.

That first day of the *Kinderlift* was something to remember. No one who was there could ever possibly forget the sight of those children stepping out of the Air Force buses at Tempelhof Airport. Their clothes were clean but patched, and they carried their belongings in cardboard boxes, even paper bags. Many were frightened to the point of tears, but were reassured by chocolates and chewing gum and the smiles of the Red Cross workers.

That first group set the pattern for all the groups to come. In the planes leaving Berlin they were subdued and scared. When they arrived at their vacation foster homes, they acted more like adults than children. Then came the pathetic little letters home, describing in tones of wonder the simple pastimes that many children take for granted—a splash in river or pond, a ride in an automobile, seeing cows and horses and pigs, or just being in quiet, open areas. In just a few weeks, a marvelous change came over these children. Their faces filled out and took on color. They learned to laugh and play. As George Kent wrote in the *Reader's Digest:*

> Sometimes the change is enough to warrant recording as a medical case history—like that of the little boy who stuttered. He had no malformation of tongue or palate; he was just a miserable child. But in his new home, near Wiesbaden, he played in a garden every day and at dusk he watered the flowers, using a watering can with his name painted on it. His vacation mother, an affectionate German housewife, hugged him and kissed him and told him over and over what a fine fellow he was.
>
> He stopped stuttering without being aware of it. And with his clear speech came self-confidence and a desire to take part in all that was going on. His own mother, listening to him when he came back, was too moved to speak.
>
> Mother after mother reported, with something akin to awe, that her children were cured of the problems that had beset them. Some even complained with pride that their children, once utterly apathetic, had now become mischievous little rogues.

All of our community relations work, so important in the over-all picture, was strictly extracurricular. It did not interfere with our mission. As for its costs, I believe that our savings through increased efficiency more than paid for our humanitarian efforts.

When we had a chart and graph section going in headquarters, we portrayed the many elements which indicated the daily degree of combat effectiveness of each of our squadrons and bases. I became alarmed to note that frequently as much as 20 per cent of our fleets of fighters and bombers were out of commission because of the lack of critical parts; occasionally this figure ran up to 50 per cent. These parts would frequently be on requisition to our depots in Europe, at Châteauroux in

France, Burtonwood in England, or Erding in Germany. Due to the timeworn practice of moving parts or items of supply by surface means it would sometimes literally take months to get parts delivered from Erding to a base in Turkey, say, or to Dhahran in Saudi Arabia. A study revealed that, largely due to railroad and border problems, supplies filling normal requisitions were in the pipeline from Châteauroux to Belgium for 120 days.

Now while this serious situation in AOCP (airplane out of commission awaiting parts) of our combat fleet existed, I noted that many of our troop carriers were sitting on the ramp at their home bases doing nothing. As I have said before, one of my pet phobias is air transport inactivity. I hate to see a transport airplane sitting around doing nothing or boring holes in the sky practicing formation flying. When I took command of USAFE, this was about all our troop carrier wings did.

On the one hand we had these transports idle or flying around empty, while on the other we were facing harassing problems in the logistic support area of our combat types. Our theater inventory of spare parts was in the hundreds of millions of dollars. Yet vitally needed combat planes were out of commission awaiting these parts—which were already in Europe, but in the wrong place.

Once we saw the picture clearly, it was easy. We merely organized the troop carrier wings into an air logistics service (ALS) and provided a daily air service between the forty bases we had in Europe and Africa and these in turn with the depots. After two months of operation, the AOCP-rate began dropping, and soon it was down to 5 per cent. Before, some 225 ships had been immobilized; now they were combat ready. This amounted to three wings, at a cost of over a hundred million dollars per wing—a substantial improvement in combat readiness or in money.

Within a year, the new ALS was carrying four thousand tons a month, and most of this cargo was in critical or high-cost items; the savings were tremendous. Our new airline also carried all our personnel between bases, speeding up our business. And finally, it handled our medical evacuation service. Due to the shortage of medical specialists, equipment, and facilities in Europe, it was greatly to our advantage to be able to concentrate our specialists at a few centrally located hospitals. Patients who could not be treated at the local base dispensaries were

airlifted to the hospitals, enabling us to give our personnel the finest medical treatment in spite of the shortages.

We were also able to effect great savings in the use of indigenous labor. All along in my military career, in India and China, on the Berlin Airlift and in Japan, I had found that the use of the local people enabled us to get the job done quicker at a lower cost. This was also true in the territories covered by USAFE. We put more and more civilians to work for us, Arabs and Pakistanis as well as Europeans. The successful use of local labor alleviated the critical manpower shortage that existed among service personnel and saved the United States the high cost of transporting, housing, and feeding the personnel they replaced. For example, we estimated early that about nine thousand jobs, particularly those in the building, maintenance, and clerical trades, could be performed by indigenous personnel. The average salary of these people in Germany, France, and England was fifteen hundred dollars per year, while the GI, with his family support, cost the American taxpayers about six thousand dollars. The over-all saving to the United States in this account alone was over forty million dollars annually. There is, of course, the question of whether it is more to the national interest to pay out this lesser sum, or to pay the additional sum to our defense budget for American troops. From the humanitarian viewpoint, the money we paid the local people not only helped them lead better lives, but flowed on into the local communities to improve the lot of many more of their countrymen.

At the beginning I had found a morale problem among my own personnel. It was easy to see why. The command had mushroomed. When the Berlin Airlift had ended, USAFE had dropped in strength of personnel and number of aircraft until early 1950. Then NATO became operative and the build-up of forces to resist any Communist aggression from the east got underway. When I took command, USAFE was already the most powerful overseas tactical force of the United States Air Force, with all the responsibilities of its complex mission, in co-operation with our sister services and America's allies, of the mutual defense of the free world.

One of the most obvious shortages of this great expansion was in housing—housing for the men with families as well as barracks for the GI's. At some of the bases the facilities for the men were unspeakable,

and the areas off base, where, generally, their families lived, were as bad or worse. I particularly remember our base at Châteauroux in France. There was mud everywhere; construction had been underway for two years. Most of the men were living in tents surrounded by mud, with stinking latrines at the end of each line of tents. Some thousand men lived in an old French hangar and another, older hangar served as the only mess hall for six thousand people, including French civilian workers. Morale at Châteauroux was where one would expect it.

In England I talked with men who traveled fifty miles twice each day to find even a passable place to live with their families. Many of our personnel built shacks on the edge of the airdrome to avoid the long ride; one of the chores awaiting them when they came home at the end of the day was the emptying of latrine buckets. In France, if it wasn't the long drive home over winding and narrow old roads, it was an extra room in a French home or a cold-water garret apartment with a single bulb on the end of a drop cord and a hand-stoked stove. Only in Germany, where we had requisitioned housing from the German civilians after the war, were our families passably comfortable.

What we needed first to alleviate this problem was money and understanding from those who controlled the purse strings. Surveys were made and requirements determined; they, plus urgent wires, were sent to the Pentagon. I sent Ray Towne out with camera crews to get a series of pictures of the mud and squalor; he did such a good job that we referred to the photographs he brought in as "our horror pictures." My staff and I made innumerable trips to the field and saw firsthand the actual conditions, heard the experiences of the men and their wives. We prepared special briefings and presented them, complete with horror pictures, to everyone who came over from the States who would listen, and many did. As an example, the Right Reverend Austin Pardue, Episcopal Bishop of Pittsburgh, received a personal briefing on his trip to Europe, and was then taken on an inspection tour of my bases in France. He wrote to his diocese as follows:

> There is no housing here for any of the men who have their families with them. Therefore, they are living in rented places and this particular part of France is nothing but a series of woebegone little towns. Hardly a family has inside plumbing or central heat. Thus, many family problems and great dissatisfaction are created. Further-

> more, costs go up and while the government makes extra allowances, the people are not able to live with self-respect. The government's austerity program has hit this base and, as I say, I marvel at the morale and at the strength of character that I find in these men, especially the officers.

Air Force headquarters in Washington, to whom these problems were practically unknown, took cognizance and action. Department of Defense headquarters got into the act and loosened the purse strings. And progress started. In Germany, with German money representing occupation cost or German defense funds, we built up complete American villages as well as individual developments within German communities; for my Air Force people alone almost nineteen thousand sets of married quarters were built as well as brand-new bases complete with excellent barracks. In all, during my four years we spent well over one billion dollars in German funds for construction and supplies.

In England, American credits had accumulated for surplus agricultural products which had and were being sent to that country; after long negotiations we were able to convert these credit dollars into three thousand sets of married quarters. As most of this money came from surplus tobacco, the quarters were commonly referred to as "tobacco housing."

In France an arrangement was made by which the French built houses on a rental guarantee program. Under its terms our government guaranteed 95 per cent occupancy for a housing unit at an air base for, say, seven years, with the housing reverting to the French at the end of that period. The French both financed and constructed the buildings. Many thousands of homes were built under this program in France, and also in Morocco.

Of course all this took time. Even after the money had been found and contracts signed, many men and their dependents were still living in substandard housing. In the meantime I personally went to Harold E. Talbott, then Secretary of the Air Force, and suggested that we purchase trailers for an immediate alleviation of the housing shortage. He responded handsomely with enough money to buy three thousand trailers and the utilities for their installation. Soon we had trailers in France, Turkey, Libya, and Morocco. There is now little question in my mind but that the young American officer and enlisted man will do everything he can to have his family with him regardless of conditions,

short of war, and that this is the way his family would have it, too. Few men go willingly to new assignments without their families; most go bitterly.

Those who sponsor such operations as frequent six-month rotation of combat units without families in times of peace are in my estimation contributing to the heavy exodus of our highly skilled and many of our most promising young men from the services. Ways and means must be taken to provide for families wherever troops are sent, with such obvious exceptions as the far north or Antarctic. It can usually be done when those in authority will try.

After four years as commander of USAFE, I was brought back to serve in Washington at the Pentagon as Air Force Deputy Chief of Staff for Operations. During my last year, I don't think I saw one single "Yankee Go Home" sign anywhere. When I left Germany, I had the solace of knowing that my community relations program had helped to break down coldness and hostility among the Germans and had fostered friendships through the other European and African countries hosting our Air Force families. This program has had violent ups and downs with subsequent commanders, but it has, in time, proven its value and some parts have become the accepted pattern. Personally I can't say enough in favor of language study, participation in local sports, and other forms of get togethers with the local people, for our servicemen. Today Air Force men and families look forward to a tour of duty in Europe.

CHAPTER VIII

MATS

OF ALL THE jobs in the Air Force, the one I wanted most was the command of the Military Air Transport Service. Fortunately, from my experience in this field, it was natural that I be assigned there. On July 1, 1958, after a frustrating year for me in the Pentagon, Tommy White, then Air Force Chief, sent me to Scott Air Force Base, to take command of that fine, world-wide transport outfit. I took command of MATS.

And then all hell broke loose.

I do not believe that the American people are aware to this day of the alarm and concern experienced by the leaders of our government and the military establishment over the events of that summer and fall. They began two weeks after I assumed command, when far away, in the Middle East, Arab nationalists killed the king and premier of Iraq and seized control of the government. The government of little Lebanon, Iraq's neighbor on the Mediterranean, fearing an attempt on the part of the Soviet Union and the United Arab Republic to overthrow the regime, called on its ally, the United States, for assistance. Promise of aid was immediately forthcoming. Within an hour after the decision was made, MATS planes were airborne, headed for the European Theater. Before the public had any inkling that there was grave danger of an eruption in the Middle East, we were in action on a large scale. By the time the decision of the President to land Marines in Lebanon was first made public, thirty-six C-124's were on their way to Europe to form a fleet of forty-eight Cargomasters there. To us in MATS the inference was obvious, dramatically so. Now, in the air age, it was the officers and men and planes of air transport who were the first to swing into action in an emergency.

Even before the Marines disembarked from the vessels of the Sixth Fleet in the Mediterranean, our planes had begun the constant cycle of flights from Frankfurt to Beirut and Turkey and back again. Here in America, special missions were set up to fly supplies and personnel direct to the critical area.

While forty-eight of our C-124's were still committed to the Middle East, another crisis broke. Artillery based on the Red Chinese mainland began shelling Quemoy and Matsu, two small islands of the Republic of China in the Formosa Strait. Once again MATS proved its capability as a force in being which required no rehearsals, no period of mobilization, no declaration of a national emergency. A heavy trans-Pacific airlift of hundreds of planes began delivering supplies to Taiwan and the Philippines. In a special movement, under conditions of maximum security, a full squadron of F-104 Star Fighters was partially dismantled and loaded aboard big C-124's at Hamilton AFB, then flown, complete with pilots, ground crews, and maintenance equipment, to Formosa. With these supersonic jets, the composite air strike force poised on Formosa became one of the fastest, hardest-hitting air task forces ever assembled. There is no question but that these sleek fighters patrolling the Formosa Strait at speeds faster than sound heavily influenced the Chinese Communists to call off the expected assault on the two little islands. The Chinese hadn't seen anything like those planes before. Their sudden materialization out of nowhere must have made the faces of Red intelligence officers even redder.

All during this period of double crisis our normal traffic continued. We called upon the civil airlines for planes to help us, on a contract basis. There was frenzied activity going on behind the scenes, but we maintained regular service all over the world, with an average of some thousand flights per month.

So impressive was this display of the swift-response capability of my command that I wished I could have participated in either or both of these operations in the field. The closest I got to either was the Operations room at my headquarters at Scott Field, from which both were directed. Even then it was not possible for me to keep my fingers directly on the pulse of the operation. While these two dramatic operations were actually in progress, I was engaged in another activity: I was trying to save, protect, and maintain the very command which was

doing such a spectacular and necessary job. For even in its shining hour, MATS was under bitter and virulent attack.

It will probably strike the present reader as incredible, now that the value of MATS has been recognized by Congress, the administration, and the public in general, that in the years 1958–1961 a handful of us were fighting for its life. Exactly how near the nation came to losing this mighty force I could not venture to say, but it was certainly dangerously close. Nor is the issue a matter of past history, better forgotten. Because of this neglect of our airlift forces during the 1950's America is weaker today than it should be, and further, this weakness, though ameliorated by the emergency purchase of some "off-the-shelf" planes, will continue at least through 1966.

From my position as deputy chief of staff for Operations for the Air Forces, the position I held immediately prior to my taking command of MATS, I had seen this situation developing. I had been called to testify before committees of Congress on matters overlapping the controversy. I knew that I was walking into a situation that might be unpleasant. Yet, trusting, I was sure that my position was the correct one, and all I had to do was prove it to make everything all right. Little did I realize the full extent and the bitterness of the opposition I was facing when I went to MATS as commander-in-chief in 1958.

Perhaps, before going further, I'd better stop and give a clear picture of the Military Air Transport Service, how it developed, what it is, what it does, and what it would do should war come. It is this last, MATS's D-Day mission, which is, of course, paramount.

I have had a personal involvement with MATS and its forerunners from the very beginning. My old Ferrying Division had been the basic division of the old Air Transport Command, and it was as commander of the India-China Division of the ATC that I had commanded the Hump. In 1948 I served MATS, the successor to ATC, as its deputy commander, and both Berlin and Korea Airlifts, though not MATS commands, were carried on largely by MATS planes and personnel.

When I returned to MATS as its commander, the operation maintained a system of a hundred thousand miles of air routes, always on a wartime readiness basis. Its mission, by direction of the Joint Chiefs of Staff, is to provide airlift for the Department of Defense both routinely and in emergency. In order to do this, its planes, crews, and

ground personnel must be in a constant state of readiness. In accordance with United States national strategy, therefore, MATS moves men, weapons, and materiel within the United States and from one continent to another. It must be able to furnish immediate resupply for both bombers and missile bases of the Strategic Air Command. It must also be able to move immediately to transport troops of the United States Strike Command (STRICOM).

The great majority of MATS operations are thus in the area of *Strategic Airlift.* Some fifty thousand people, out of a total MATS strength of about one hundred thousand, and half of the one thousand-odd aircraft in MATS inventory, are assigned to airlift operations.

To perform its missions, MATS trains assiduously, every day, flying the same routes that it would fly in wartime. The mission that MATS would fly in combat is exactly the same mission that has been flown day in and day out in the never-ending, exhaustive program of supplying our overseas forces. The routes are not strange, the crews are not unfamiliar with conditions, procedures, facilities, and bases along them. In an explosive world situation, therefore, MATS does not shift into a new, different operation, but simply steps up the tempo of what it has been doing all along.

MATS also operates three technical services: the Air Photograph and Charting Service, the Air Weather Service, and the Air Rescue Service, which has as its primary mission the rescue of downed airmen. These services have a combined strength of some fifty thousand personnel. Each is a story in itself.

Another MATS function is the aeromedical evacuation operation, AIREVAC. A special aircraft, the C-131 Samaritan, with medical facilities not found on regular cargo or passenger aircraft, is used for this purpose. The program serves the Army, Navy, Air Force, and other governmental agencies. It can bring a patient from anywhere in the world to a designated hospital in the United States, normally within one day. In domestic operation these "flying hospital wards" take off or land every thirty-seven minutes, every day.

Another service which MATS performs, and which only MATS can perform, is the movement of all missiles, large and small. It has the only aircraft in the world large enough to carry big operational missiles, such as the Atlas and Titan. The smoothness of air transporta-

tion, as compared to the shaking and banging of rail or truck, is essential in the case of a delicately machined missile.

Another special cargo MATS carries includes Very Important Persons and high-priority diplomatic materials. A squadron operating out of the Washington area provides specially equipped passenger planes for the use of the President, other high-ranking government officials, and visiting notables.

For additional planes and personnel, MATS can call upon the civil airlines. Together with the airlines and the Defense Air Transport Agency, MATS has selected and earmarked some 225 civil airplanes for this purpose and, through contracts, has modified and equipped these planes so that they can fly overseas missions as augmentation. They comprise the Civil Reserve Air Fleet or CRAF. The primary purpose of CRAF is to render direct support to our operations in time of war. As an incentive to the airlines to participate in this program, which represents an appreciable amount of business, peacetime airlift contracts are normally awarded only to airlines with CRAF contracts. By calling on many of these civil aircraft to replace our military planes for routine runs, we were able to carry out the intense demands created by the Lebanon and Formosa Straits incidents. At that time MATS was buying airlift from the carriers at the rate of eighty million dollars annually.

But the CRAF program was by no means perfect. These planes were not always immediately available, as civilian airlines could hardly be expected to shift their operations as a military organization must. At peak periods of commercial transport activity, such as the summer vacation season, some of the airlines were loath to release to us on a low-bid basis planes which could be used for the lucrative passenger service. Further, though it was not so specified in the individual contracts, common sense and experience indicated that these planes would be most useful only in our most routine operations. In the Korean War, for example, the airlift between the United States and Japan was effectively bolstered by civilian planes and personnel, but the real Korean airlift, from bases in Japan into Korea, where people were shooting at each other, was strictly military.

Over the years MATS has been engaged in one headline airlift after another, many of them in the humanitarian category to relieve distress

and suffering. Here are a few, chosen to show the diversity of operations.

In 1952, the Magic Carpet Airlift moved four thousand stranded Moslem pilgrims from Beirut, Lebanon, to Jidda, Saudi Arabia, which was the nearest airport to their destination, the Holy City of Mecca.

Two years later, Wounded Warrior Airlift evacuated five hundred French troops, wounded in the battle of Dien Bien Phu, from Japan home to France.

Safe Haven Airlift, 1956–1957, transported 14,263 Hungarian refugees, victims of Communist tyranny, to the United States.

When earthquakes in Chile literally reshaped parts of that country, MATS flew seventy-seven mercy missions to Chile in the longest airlift flown up to that time. Tons of clothing, food, helicopters, and medical supplies including two complete Army field hospitals were flown in to aid the homeless millions.

Strategic airlifts over the years have included such well-known operations as Korea, Suez, Lebanon, and Formosa. Perhaps less publicized was the airlifting of Thor intermediate-range ballistic missiles and their equipment (with five hundred transatlantic trips) from California to England. In 1960 the Congo Airlift, which supplanted the Chilean Airlift as the world's longest, began. Operated for the United Nations, it has utilized a peak number of sixty aircraft along the five-thousand-mile route from Europe to Leopoldville, taking in over thirty-five thousand troops and some ten thousand tons of equipment to aid the UN in preventing all-out war in the Congo.

In contrast to this equatorial airlift, year after year MATS has continued "Operation Deep Freeze," supplying bases deep in Antarctica with everything from bulldozers to fresh eggs by air drop, as well as landing on floating ice fields in the Arctic to supply our weather stations there.

These missions are directly related to the primary mission of MATS, to maintain D-Day readiness. Only through actual performance can MATS remain on its toes. Air transport men have a saying: "You can't can airlift." Day-to-day missions fulfill a double need: The specific mission itself, and the training for D-Day readiness. In comparison to most military units, from the Infantry to the Strategic Air Command, which can only practice their D-Day mission, MATS must practice and perform at the same time. It seems only reasonable to me that the entire nation

benefits by this duality, and that MATS should be encouraged and sponsored in this complex and beneficial operation.

And yet, when I took command of MATS in 1958, it was being squeezed out of business. Two powerful forces were exerting pressure. One was within the military establishment itself, the other was within the civilian airline industry.

The pressure against MATS from the military establishment reflected the Eisenhower Administration's overemphasis on the massive-retaliation principle and the resulting reluctance to allocate large funds to any branch of the military but the deterrent forces. The reason for this determination to place an unreasonable proportion of our military resources into one basket was based not only upon military postulates, but on practical politics as well. The Eisenhower Administration had pledged itself to hold down taxes, and the emphasis on massive retaliation with nuclear weapons fit in well with the national economy drive. Expensive as nuclear bombs and the capability to deliver them may appear, nuclear forces are cheaper to establish and maintain than forces adequately balanced between nuclear and conventional capability. Even the slogan, "Big Bang for a Buck," fit in.

It was on the Army and the conventional commands of the Air Force that the economy ax fell hardest. It was of this period that General Matthew B. Ridgway wrote, after his retirement: ". . . In my job as chief of staff, I say in all earnestness and sincerity that I felt that I was being called upon to destroy, rather than to build, a fighting force on which rested the world's best hope for peace. Day by day, by order of my civilian superiors I was called upon to take action and to advocate policies which, if continued, in my judgment would eventually so weaken the United States army that it could no longer serve as an effective instrument of national policy . . ."

In my opinion, then and now, our forces should be balanced. Certainly our deterrent force, which, prior to the development of the Navy's submarine-borne Polaris missiles, was comprised entirely of the Strategic Air Command, was everything its boosters said it was. It was a sword of Damocles poised over the head of any aggressor. It could obliterate the Soviet Union, Communist China, or both, from the face of the earth. The free world needed its deterrent force then, it still needs it now, and will continue to need it in the foreseeable future. It has saved the world

from general war and the annihilation of millions. I certainly have only praise for SAC, and have always co-operated with it to the fullest extent. Just prior to taking command of MATS, for example, I had, as Chief of Operations of the United States Air Force, worked closely with the B-70 program. I became familiar with it and was pleased to see North American Aircraft get the contracts to research and develop this supersonic plane designed primarily for SAC.

But all this time the world was undergoing crises, international disturbances, and small wars. The "Big Bang" theory just doesn't seem to work in these brush-fire engagements. We did not use our nuclear power in Korea, nor Lebanon, nor the Formosa Strait, nor Laos. It is of little use to us in recurring crises over Berlin, Cuba, or Vietnam. Thus, although we had the potential to wipe our enemy off the face of the earth in the event of general war, we could, in the meantime, through lack of conventional forces, see one small part of the free world after another be whittled off in small wars.

I knew from personal experience the difficulties and delays we encountered in Berlin and Korea through shortage of airlift. Fortunately, we were finally able in both situations to muster enough aircraft and personnel to do the job. Suppose our sturdy old wartime planes had not stood up as well, and we had been forced to undertake either or both campaigns without adequate aircraft? The answer to that question had been demonstrated in 1956, when the British, French, and Israelis attempted to seize the Suez Canal to prevent its nationalization by Egypt. From a strictly military point of view, if the British had had adequate airlift, they would have been able to move their troops from England and staging areas on the island of Cyprus quickly and in sufficient strength to Egypt and the Suez Canal to be victorious. As it was, it took many, many days to transport the troops by ship, and before the objectives could be taken, the British were persuaded by the United States to call off the war. With adequate airlift, the operation could have become a *fait accompli* before United States intervention.

Thus, within two years, as commander of USAFE in Europe in 1956 and as commander of MATS in 1958, I had seen one campaign—Suez —fail through lack of airlift, two—Lebanon and Formosa—succeed through sufficiency of airlift. What perturbed me was that our airlift capacity, through normal attrition and obsolescence, was decreasing.

There was no long-range program whatsoever in existence to develop and build modern planes to augment this capacity. There was no stop-gap program in existence to replace our aging equipment.

On the contrary, MATS was about to lose its 110 troop carriers, fully half the entire fleet of C-124's. A program to assign these planes to the Tactical Air Command had already been approved up the line and was awaiting final action by the Chief of Staff. This would have meant a considerable downgrading of MATS, but worse, for the country, a dissipation and dispersal of air transport forces which were already in critically short supply. This drastic proposal greeted me the day I took command of MATS. I managed to stall final action for a time. Later, during the Lebanon and Formosa crises, as we scraped up planes and dispatched them east and west across two oceans, the thought of how close we had come to losing those planes sent cold chills up our backs. Could we have carried out both operations with only half the planes available to us?

On one of my numerous trips to Washington during that hectic period I went in to see General Thomas White, Chief of Staff, USAF, and made a personal plea to him to review the decision to split MATS' fleet of C-124's with TAC. I asked him to reconsider the entire question of our airlift policy.

"Frankly, Tommy," I said, "on the basis of my experience with air transport I firmly believe that this is the wrong way to go."

He listened attentively as I cited the confusion which would have developed had the planes already been transferred, with the overlapping of effort and responsibility that would have resulted from two commands attempting to do the same job. I had an excellent example of this. After much pleading I had been loaned some C-124's and crews by the Air Materiel Command. They were loaded and dispatched across the Pacific. However, as they carried only one crew—ours were sent out with two crews—they had to stop periodically en route for crew rest. They were also of a slightly different model, and those which needed maintenance en route could not get all the particular parts required. What was a normal thirty-six-hour trip lasted six days. Last-minute co-ordination just doesn't work.

"All right, Bill, you've sold me," General White said when I finished. "I'll rescind the order. You can keep your planes."

But this was only one battle won. The over-all situation remained the same. In the Administration, in the Department of Defense, in the Joint Chiefs of Staff, the advocates of the Big Bang philosophy were firmly in control. So mundane an area as air transport was relegated to the bottom of the priority list on grounds of both grand strategy and economy. My own views were in variance with some of those on the air staff. I felt that we should be equipped and prepared to deal with the small wars and international disturbances in a manner short of dropping the bomb. As for economy, I was positive that money spent for airlift would actually be far less in the long run. We had proved over and over again the economy and advantages of transporting expensive and high-priority military materiel by air. The case for air transport of military personnel was even stronger.

Today, with STRICOM, a potentially superb force actually in being within the continental United States, it may be difficult to remember that in 1958 such an idea was anathema, both militarily and politically. It was clear to me that, as affairs stood then, it was going to be difficult to maintain MATS as it was, let alone bring in the sweeping, billion-dollar improvements necessary to enable us to do the job right.

But all along this military pressure was not directed *against* MATS so much as *for* the almost exclusive program of massive retaliation. The active, all-out assault on military air transport came from another quarter, the Air Transport Association and some of the airlines it represented.

The airline industry in 1958 was not too well off. The dream of a great air transportation boom in both passengers and cargo born in World War II had not been fulfilled. As jet-powered planes became available, the airlines could see more problems on the horizon. The new jets would be bigger, with more seats to fill. Where would the additional passengers come from? How would these expensive new planes be paid for? And what about the piston-powered planes which the new jets would replace? What would be done with them? The growing competition from foreign airlines was also eating into the revenues of the lines flying international routes. Looking about for a panacea for all these problems, the ATA discovered MATS. Although the airlines were already getting a quarter of a billion dollars a year from the government in the form of individual passenger tickets for military personnel and special charter service hired by MATS, the ATA figured the airlines

could get another five hundred million dollars a year by grabbing the military cargoes and personnel flown by MATS.

The ATA thus launched an all-out campaign to take over MATS' peacetime job—the job which insures MATS' readiness for war. The attack came on several different fronts. Members of the Congress, in both houses, were persuaded to investigate the operations of MATS and to introduce legislation which would curtail those operations severely. Powerful organizations like the United States Chamber of Commerce and at one time, certain important members of the American Legion, prior to its National Convention, took anti-MATS positions. The press of the nation, including some aviation magazines whose editors should have known better, jumped on the bandwagon. Lengthy and critical articles on MATS appeared in *Time* magazine, *The New York Times,* and the *Wall Street Journal,* among others.

God knows why, but before I came along, MATS was taking all this lying down. After I assumed command, I had a thorough study of our operations made by John Hohenberg, a Columbia University professor serving as a special consultant to the Secretary of the Air Force. In it Hohenberg asserted that the public had been supremely indifferent to military air transport. "Until the past twelve months," he wrote, "even MATS itself did nothing to call attention to its plight. In view of this record it is to be wondered that we have any military airlift capability at all.

"The most curious development of all," Hohenberg continued, "is that the communities nearest the MATS bases, and their elected and appointed officials, apparently have not the slightest inkling that the organization which provided a substantial amount of their business was in serious difficulty. It is a fact that when there is even a rumor of reduced activity in most Army posts or Air Force bases, the commander is besieged by delegations of anxious and often angry officeholders and townspeople. This did not happen in the case of any town or city near a MATS base until the annual crisis was almost over, and then the reaction was confined to factual news coverage and editorial comment in the local press. A supply operation essentially does not have the glamor that makes for intense local interest. That, coupled with commendable restraint displayed by both the Air Force and the MATS command, probably accounted for the subdued show of public interest.

It is reasonably clear that MATS suffered from a lack of fundamental understanding of its mission, both without and within the Department of Defense. . . .

"The Military Air Transport Service has been the target of more abuse, misinformation and outright untruth than any other part of our armed forces," according to Hohenberg's report. "It has been difficult, if not impossible, for the truth to catch up with them in many cases.

"While there is no doubt that a part of this bumper yield of ill will is caused by ignorance, a substantial proportion emanates from those who either should know better or, at the very least, are in a position to obtain correct information with little trouble."

I'm sure that the general assumption on the part of the public was that the attacks levied against MATS were the reasonable outgrowth of sound thinking on the part of the major airlines. This was not the case at all. Only three of the well-known airlines worked with us, and they accounted for more than 70 per cent of all the business given the commercial carriers, with a swarm of small companies fighting for the balance. Some of these small companies were entirely dependent on MATS for their existence. A few did not own a single airplane; if and when they got a contract, they'd lease a plane. The most virulent attacks on MATS came from these smaller outfits, some of which were skating so close to the edge of unsafe operation that it was questionable whether they should have any government business at all, much less more of it. Hohenberg's report tells of a company which landed an overseas job and then could not find a navigator. It flew the plane to the port of embarkation and there attempted to borrow a navigator from the Air Force. Failing in that, the company then ran a help-wanted ad in the newspapers.

The charges against MATS were reiterated over and over again, in newspaper columns, magazine stories, broadcasts, and telecasts, in speeches before numerous patriotic and trade associations, and before Congressional committees. The copies of the hearings before Congressional committees on this one subject weigh several pounds. To boil all this verbiage down to a few paragraphs is doubtlessly most unfair to those who cooked it up, but here goes:

—MATS, with its fleet of some twelve hundred planes, was the largest air transport operation in the world.

—MATS was in direct competition with many commercial airlines.

It flew the same routes that commercial airlines flew. Its flights were operated on a schedule. MATS was, in short, an airline.

—Many of MATS planes were plush, prettied-up jobs with many seats removed so the brass could loll around.

—MATS employed 480 beautiful stewardesses to administer to its passengers, a plethora of pulchritude.

—MATS' attempts to justify itself by claiming to support the vital Strategic Air Command were not valid, inasmuch as SAC maintained a fleet of one hundred transports of its own.

From these premises, the ATA went on to make positive proposals to anyone who would listen, including Congress. These proposals, designed to make MATS cargo available to the civilian airlines and the Civil Reserve Air Fleet on the grounds that government-owned operations should not take business away from private enterprise, were as follows:

—MATS' equipment and personnel should be sharply reduced in numbers.

—MATS should drastically reduce its flying time for both equipment and personnel. Flight simulators could be used to train flying personnel.

—MATS should fly its planes empty.

The average taxpayer, looking over these well-marshaled arguments and the conclusions drawn therefrom, would probably agree that they made good sense. So, at any rate, did much of the nation's press, several national organizations, and many members of Congress.

Actually, however, the facts were these:

—*MATS, the world's largest airline.* More than half of MATS twelve hundred planes were specialized aircraft assigned to the technical services, and had nothing to do with transportation. MATS was indeed a large airline, having a lusty, demanding, and often impatient customer in the Department of Defense, but it was by no means the world's largest—that was the Soviet Union's "Aeroflot."

—*MATS operated special plush jet planes.* MATS did maintain exactly three planes, modifications of the K-135 SAC tanker, for the express use of the President, Congress, and top-level officials and high-ranking dignitaries of other nations on special missions. Secretary of State John Foster Dulles and, later, his successor, Christian Herter, practically lived in one.

—*Flying the same routes as civilian airlines, and on schedule.* The explanation to this should be obvious. Between any two points on a world surface, say, Washington and Frankfurt, a most important run, there is bound to be one superior route. Should MATS fly a more circuitous route than civilian airlines? It would also seem somewhat inefficient not to schedule flights—should the plane be sent off willy-nilly whenever a pilot felt like taking a ride? A schedule is simply an efficient program.

—*480 beautiful stewardesses.* The actual number of WAF personnel assigned to MATS flights during that period was just under 250; there were many more male attendants. Surely no one would argue that our military dependent passengers, often totaling over one hundred women and children on one plane, should be left unattended on long, trans-oceanic flights. Our female attendants were well suited for duty on these flights, particularly to care for children and to dispense food. In the circumstances under which a WAF could serve as flight attendant, she freed a male airman for other duties. We did acknowledge that our American service girls were pretty. We were proud of them.

—*MATS' riding on SAC's coattails.* This just wasn't true. MATS supported SAC on a routine daily basis and was assigned specific and vital re-supply duties in the event of war.

To accede to any of the recommendations of the airlines would both weaken MATS and its potential to carry out its D-Day mission, and would cost the American taxpayer many millions of dollars.

I could hardly agree to the curtailment of equipment and personnel; the twin crises of Lebanon and Formosa proved our current strength inadequate.

Reduction of the utilization rate, which had been set by the JCS at five hours per day, would seriously endanger the success of the MATS D-Day mission. The five-hour utilization rate was already on rock bottom; I knew this from bitter experience, and any officer who had served on my staff in either the Berlin or the Korean Airlift knew it too. In Korea, we had attempted to surge from a utilization rate of 2.8 to a utilization rate assigned us by the Joint Chiefs of Staff of ten hours per day. Though we gave it all we had, we were able to bring up the utilization rate, in the most crucial period of the war, to only four hours per plane. In order to surge to all-out heights of utilization in the most crucial

period of the next war the very first few days, it is absolutely essential to have a high utilization rate from which to begin.

The suggestions that our crews train in simulators, or that they fly empty planes, seemed at first glance almost too ridiculous to answer. I don't think there'd be anyone cognizant of flying safety, including the ATA, who'd accept the responsibility for accident prevention with pilots flying ten hours a month and in simulators. Besides, a pilot flying an airplane is only a part of the training involved in an air-transport operation. MATS must train constantly in many areas—maintenance, traffic, and all the problems pertaining to the handling of both cargo and passengers. There just isn't any way you can train for an airlift except in the operation of an airlift. This was what MATS was doing, around the clock: Training for its D-Day mission of operating an airlift.

Many proposals were made which would increase the use of civilian aircraft in military operations, including the D-Day mission. MATS was already using chartered CRAF planes in day-to-day operations, and a definite plan had been worked out to feed them into wartime operations at a specified time. However, I did not feel that MATS should count on using civilian equipment or personnel in peacetime missions to hot spots, or in full participation in time of war. As the commanding officer of a military organization with a highly important and strategic war mission, I considered it imperative to have my personnel subject to the Articles of War. Civilian pilots and equipment could perform important functions, but for duty in danger areas, or without warning, military personnel alone would do.

Although anachronistic, I would like to point out as a pertinent example the praiseworthy job MATS personnel performed in the Congo Airlift. At the outset, MATS operated about 850 missions, carrying in eighty-five hundred United Nations personnel and thirty-seven hundred tons of cargo. These forces provided an essential element of stability in that new, riot-torn republic. But it was a rough airlift job. In Africa, flight crews slept on the concrete aprons beneath their planes, occasionally hearing snakes hissing around them in the dark. They lived on C-rations and water. Some contracted malaria. Members of one crew were beaten up by a group of Congo soldiers; they were saved just in time by some Ethiopian UN troops. The pilot suffered, according to the terse language of the medical profession, "multiple lacerations of the

scalp and face, contusions and abrasions of the back, fracture of 11 ribs and fracture of the skull." It later developed that he also had a punctured lung. Despite such dangers, not one man of the Air Force personnel flying the airlift refused duty. They were all military men, good soldiers in the finest tradition of the word. Of course, as is true in any military organization, any man who failed to carry out his orders would have been court-martialed.

In contrast to this military dependability, during the Lebanon and Far East crises there were ten separate occasions in which MATS was unable to secure enough civilian planes to help us with our routine flights; it was summertime, vacation season. Also, in some cases all bids were so high they had to be rejected. Thus, while the ATA was beating the drums trying to get MATS business for the airlines, some of those airlines were turning it down at the very time we desperately needed them.

It is necessary for MATS to train constantly, twenty-four hours every day, to maintain instantaneous readiness for its D-Day mission. This training requires not merely flying an airplane, but full-scale operation of every phase of the military airlift. If we had flown our planes empty, we would not have been training properly. Thus we did in peacetime practice basically what we would do in wartime operations: carry people and materiel about the world. MATS was already passing on to the airlines a minimum of $70,000,000 a year for augmentation of its own peacetime operations, and the DOD was buying another $250,000,000 worth of air transport in the form of individual passenger tickets, bills of lading, or special charters of aircraft. Still the lobbyists were demanding from Congress a bigger share of MATS business. My cost experts got out their pencils and figured that to split the military materiel and personnel MATS planes carried with civilian airlines would add another $300,000,000 to the Defense airlift bill. If we flew empty, as many airlines spokesmen advocated, it would cost another $750,000,000—totaling a one-billion-dollar annual peacetime airlift bill to be met by the American taxpayer.

Another point of attack was the MATS policy of letting out contracts to the lowest bidder. Through this system we were able to secure bids for as little as seventy-nine dollars per head from New York to Germany for Department of Defense personnel and their families. Some of the airlines which won these bids later termed them disastrous, but the long-

range effect, as far as the nation and the riding public were concerned, has proved to be most beneficial. At that time the cheapest seat from New York to Frankfurt was $328. Our low-bid policy forced commercial carriers to do the job for less, and they proved to themselves that they could charge a more reasonable rate and still make money. In 1958, military personnel and their dependents were comprising fully half of the passenger travel to Europe and much more than half of the travel to Alaska and the Far East. As rates were lowered to the general public, more and more people took advantage of them, with the result that today the commercial traveler or tourist can get a reasonable rate in economy class and should soon get an even better one; well-managed airlines are prospering. Reduction of fares has opened up a whole new world of travel both to the airlines and the general public.

Apart from the potential danger to both American defense and American economy threatened by the ATA attacks, they had two direct and deleterious effects on our current operation. One was to make it even more difficult on our planning section in its routine, important mission of requisitioning today equipment and materiel which we would need tomorrow. The pressure of the attacks, plus the reluctance of the administration and DOD to spend money on so out-of-vogue a command as MATS, seriously curtailed our efforts just to keep what we had. For several years in the 1950's we did not have a single new airplane in design or on order. And airplanes are not a commodity which you can just run over to the shopping center and pick up.

Nor could these attacks fail to depress the morale of our people. MATS had a good safety record, and with the even greater emphasis on safety I brought in with me I expected it to be even better; our safety performance was, in fact, as Clay Blair, Jr., pointed out in an article in the *Saturday Evening Post,* "The envy of every airline." But this constant hammering on MATS naturally had its effect.

"Morale is one of our gravest problems," Red Forman, then a brigadier general commanding McGuire Air Force Base, told Blair for the same *Post* article. "Frequently I have to gather all the officers and men in the auditorium and drum into them that what we are doing is important for national security. We are attacked nearly every week by someone."

When I inherited MATS, I found it operating without the enthusiasm and the *esprit de corps* I would have liked. The sudden, important activity

brought on by the twin crises overseas changed attitudes dramatically; there's nothing like hard work and accomplishment to make a good soldier buck up. Further, I had seen on previous occasions how a good, lively newspaper fosters healthy morale. Such a newspaper would also be a welcome adjunct to our arsenal of defense against the airlines attack. We had a hundred thousand people, both military and civilian, in our employ, and that many people, alerted and informed, could make up a force to be reckoned with. The paper was begun. Later we added a new feature, called "Newsclips." I believed that our personnel would be encouraged by the recognition I hoped would be forthcoming, and arranged to have pertinent items on MATS in the press reproduced and sent around to all our bases. As we got our case before more and more newspapers and magazines, this news service proved to our far-flung personnel that they were not alone, that the nation was beginning to know and to care.

In my first few weeks on the job I felt I could resolve all our differences with the airlines through explanation and reason. With the help of my old friend, Jim Douglas, who had become Secretary of the Air Force, I invited the presidents of each of our United States airlines out to Scott Field for a thorough briefing on our entire operation. I was naive enough to think that a presentation of our case would appeal to both their common sense and patriotism, and that they would then call off the war. In the case of such men as C. R. Smith of American and W. A. Patterson, of United Airlines, I was right, but these two had never participated in the fight on MATS in the first place. It was the smaller lines and the ATA's lobbyists who resisted our explanation and our appeal. Despite the briefings the attacks went on.

By now MATS and I found ourselves in much the same position I had found the Marines at Hagaru-ri—surrounded. The civilian airlines, the press, vociferous members of Congress, national organizations, even bureaus of the Department of Defense and the military establishment, including officers I had known well over the years—all were closing in. The decision to fight back was not at all a difficult one. I knew that there was a danger that the impending controversy might be bad for the Air Force, bad for the airlines. But the alternative, permitting the emasculation of the nation's airlift force, would be infinitely worse. If I had failed to fight, our strategic airlift would certainly be in pitiful shape by now. And so we did fight back, in every way we could.

One way was through public opinion. We took our story to the press. One of the nation's highly respected military analysts was Brigadier General Thomas R. Phillips, USA (retired), appearing in the *St. Louis Post Dispatch* and other papers. We invited him to Scott Field, showed him our complete operation, and let him draw his own conclusions. The result was a two-part, highly favorable comment published in several major newspapers. Holmes Alexander, another widely syndicated columnist, also wrote favorably of our position. The *Armed Forces Management Magazine* carried a thorough, well-researched piece by Bill Borklund. The *Air Force Magazine* permitted me to present our case in its pages. Many other newspapers and magazines began presenting the case for MATS favorably, and others presented both sides of the issue. Many of those which attacked us, or which attempted to present an unbiased account, permitted a rebuttal. Thus, in answer to lead editorials in *The New York Times,* I wrote letters, which were printed, setting forth in some detail the facts of the issues involved.

We were able to present our side to several members of Congress. Among those who made speeches in our favor and had favorable articles inserted in the *Congressional Record,* were Senators Howard W. Cannon, Barry M. Goldwater, and J. Strom Thurmond, and Representatives John F. Baldwin, Jr., Melvin Price, and L. Mendel Rivers.

Two of the major national organizations which had early lined up on the side of the civilian airlines were the American Legion and the United States Chamber of Commerce. MATS sprang to its own defense in both these important forums. Both responses began on a grass-roots level.

A major MATS base is located at Charleston, South Carolina. John Rivers, owner of a Charleston television station and a prominent member of the local Chamber, had learned from his own observation and from his reporters who had covered operations at the base that MATS was doing an efficient and important job. He arranged for the Armed Forces Committee of the Charleston Chamber to come to Scott Field and receive a special briefing, and make their own complete investigation of our operation. They must have liked what they saw, for when they got back home they passed a resolution completely favorable to MATS, in opposition to the position of the national Chamber.

James F. Seagraves, a reserve officer employed as a civilian at Scott Field, invited the Chamber of the nearby city of Belleville, Illinois, to pay

us a similar visit. The Belleville Chamber, too, was impressed by the MATS organization, and so stated in a resolution. Copies of these resolutions were sent to every other Chamber in the United States. Such a complete, 180-degree variation in position could not help but cause comment. The discussion grew within the national body and reached the point that the issue was brought before the National Defense Committee of the Chamber in a special meeting.

To present the MATS position, I sent my second in command, Major General Raymond J. Reeves, a most articulate, personable, intelligent, and dedicated officer. It was the first time that a member of the Air Force had discussed MATS before the Committee, and the members were keenly interested both in Reeves's speech and in his thoughtful, straight-from-the-shoulder answers to the questions they shot at him after his formal talk.

It was Seagraves who carried the ball for us at the convention of the American Legion, of which he was a prominent member. When the Legionnaires were apprised of the true facts, they approved a resolution urging the Congress to provide sufficient modern aircraft and training facilities to enable MATS to carry out its missions. Other patriotic organizations, notably the Jewish War Veterans and the AMVETS, passed similar resolutions.

Long before our work with these organizations had come to fruition, I had taken the offensive both in the military establishment and before Congress. Whether in football, war, or debating, the best defense is a good offense. Thus, while we were still receiving fire from every quarter for running too big an operation and taking business away from the private airlines, I began militating for a sizable augmentation of MATS flying equipment. Actually, no matter what our situation had been vis-à-vis the ATA, MATS desperately needed strengthening. Our planes were obsolete and obsolescing. The backbone of the fleet was the C-124, that wonderfully sturdy ship I had sold Stu Symington during the Berlin Airlift, Christmas, 1948. Our 124's had given great service, in the Korean War, in constant training, in our many emergency and humanitarian airlifts. But now, in comparison to the planes which the aircraft industry is today capable of building, their range is too short, capacity too small, and operation cost too high. The time to replace them completely was

long overdue, and yet there was not only no replacement on order, none was even in the state of design.

Ever since the days of the Hump, those of us in air transport had been talking about the perfect transport plane. Many of these features had been incorporated in the C-124, but now the industry was capable of giving us much more.

For one thing, we wanted an airplane that could do the airlift job faster, with more responsiveness, and in greater quantity—a big plane which would be able to carry heavier loads, as well as bulky loads. In both the Hump and the Berlin Airlift we had had to cut up heavy equipment in order to get it on the airplane, and loading could only be done by hand. We knew the disadvantages of this cumbersome procedure, and we wanted a plane on which we could load bulky objects without chopping them up first, and by mechanical means.

In my opinion, the military cargo airplane should be loaded straight in from either the front or the rear instead of through a side door. The whole envelope should be available for a maximum-size object, such as our biggest missile. Thus the plane should have a swing tail or some other method of straight-in loading. It should sit low, at truck-bed height, so that it can be loaded directly from standard commercial trucks, thus eliminating the need for high-lift trucks and fork-lifts. In a low-wing monoplane, the wing sits on the wheels, and the fuselage in turn sits on the wing; it's pretty far off the ground. In the high-wing design, the fuselage is closer to the ground; this, then, would be preferable.

For some reason, no cargo airplane had ever been built in which tonnage and range were completely interchangeable. We figured on a maximum range of seven thousand miles. For shorter ranges, cargo would be substituted proportionately for gasoline. Thus the plane we wanted would be able to carry an appreciable load from California nonstop to the Orient and a much heavier load to Hawaii.

For this plane, speed would be of little consideration. By using air instead of surface transportation, we are able to cut time in transit from weeks to hours. After such a reduction, the additional saving of an hour or two through more expensive engines, burning up fuel at a greater rate, seemed pointless. Nor did I care about the type of engine to be used. No piston-type engine would provide sufficient horsepower for the eighty-

thousand-pound capacity we hoped for, and so it would have to be either turboprop or turbojet; that decision would be left to the engineers.

Another thing I was looking for was low-cost operation. Government defense contracts today pay roughly fifteen cents per ton-mile; airlines with a full load and modern equipment should make money at this rate. Highly efficient operation with full loads both ways might bring this cost down to eleven cents.

This was our major requirement—a work-horse plane, cheap to operate, of indifferent speed, relatively large, and easy to load. It would become the backbone of the fleet.

In addition, we needed a smaller number of planes which could carry outsized cargo, such as missiles, trucks, and tanks. The huge Douglas C-133 would serve this purpose well.

Third, we needed a fast jet transport which would be immediately responsive to SAC requirements in capability to keep up with the B-47's and B-52's. Any one of the three commercial jets—Boeing 707, Douglas DC-8, Convair 880—would be acceptable. As they were all available, these planes could also serve as stopgap aircraft until the work-horse planes would be available—some time in the dim and unresolved future.

Thus, while MATS was being attacked from every quarter for having too much equipment, flying too many hours, and hauling too much cargo, I lit the match to an all-out program to increase them all. Our objectives:

1. A modernized MATS fleet composed of a work-horse plane, an outsized cargo plane, and a fast jet transport.

2. Effective, day-by-day training at the minimum rate to provide all-important experience for our entire system in handling personnel and cargo flights on routes tying in with wartime requirements. I accepted the five-hour utilization rate as a compromise between adequate training and economical management.

3. Use of this productive capability of MATS by all military services to permit the most efficient and economical operation. (Instead of curtailing our cargo, in other words, economy and efficiency demanded that the military establishment augment it. By that time the Air Force had saved the taxpayer billions of dollars through increased use of air transport, but the Army and Navy were still utilizing traditional methods of shipment to a large degree.)

4. Augmentation of the Civil Reserve Air Fleet consistent with the

needs of the military establishment to insure prompt delivery in peacetime, and to have a powerful reserve force that could be called upon, after the first surge to wartime strength on the part of the military fleet, to help meet any emergency. (This was no bone thrown to the airline industry, but a full appreciation of the vital contribution made by the airlines in both peace and war.)

When I put forward these proposals, the fur really began to fly. Apparently the civilian airlines that were hostile and the Big Bang advocates in the military establishment and the Administration had actually expected those of us who had devoted our careers to air transport to sit back helplessly and watch the emasculation of MATS. Now our opponents finally found they had a fight on their hands.

To repeat, this fight was not of my own choosing. I did everything I could to bring about a conclusion which would be satisfactory to both sides. I was not interested in a personal victory, only in a dependable airlift capability. My transport-trained friend Jim Douglas, who had moved up from Secretary of the Air Force to become Assistant Secretary of Defense, suggested one possible solution. He recommended that a special group of prominent citizens be named to examine the issue. My staff and I worked up a proposal to this effect, and I presented it personally to the new Secretary of the Air Force Dudley C. Sharp. He, too, liked the idea, and I augmented the proposal in an informal memo. In it I pointed out that there were many solid, influential men in civilian life who had an understanding and a knowledge of military aviation. I proposed a list of prominent Americans, Secretary Sharp added a few names, and the ATA was asked to submit candidates. From these names a committee was formed.

The chairman was Gordon W. Reed, chairman of the board of Texas Gulf Producing Company. Reed had served on the War Production Board in World War II and had also spent considerable time as an advisor on procurement to the Air Materiel Command. Other members of the committee were James W. Austin, president of Northeast Airlines; Dr. George P. Baker, professor of transportation, Harvard School of Business Administration, and president of Transportation Association of America; General Charles Bolte, USA (Retired); Frederick M. Glass, vice president and vice chairman of the board, Empire State Building Corporation; William B. Harding, of Smith Barney and Company; and

Jacob C. Saliba, executive vice president of Farrington Manufacturing Company. This committee spent months on a thorough and comprehensive study of the issue. Scores of witnesses appeared before the committee, and, judging from my own experience, its members listened carefully and attentively. They obviously spent a great deal of time and study on the entire issue, because their report was full and thorough. I agreed with some, but by no means all, of the committee's findings. Essentially, it recommended both that MATS be modernized and that more business be given to the civil airlines. I telephoned Gordon Reed and told him I was not happy with some of his conclusions. He asked which ones, and I enumerated those recommendations which would give more of MATS tonnage to the airlines. When I finished, Reed laughed heartily.

"Just before you called," he said, "I got a call from the airlines representatives. They are most unhappy too, over our recommendations pertaining to the modernization of MATS. We must have done a pretty good job, inasmuch as both of you are mad at me."

In retrospect, I do perceive that the committee's report was helpful to the Air Force and the Administration. Many of its findings coincided completely with the MATS position, and thus gave a respected and influential backing to the cause of military air transport.

But the major battle was fought in Congress. It seemed that I was constantly supervising the preparation of lengthy and detailed presentations, constantly flying to Washington, constantly sitting in the witness chair testifying before committees of both the Senate and the House. Some of our presentations were so complete that many days were devoted to them; often separate phases of our report would be divided up among half a dozen top officers especially chosen both for their *expertise* and lucidity in the witness chair. Sometimes there were fiery exchanges, but the fireworks in the hearing rooms were nothing compared to what was going on behind the scenes. For just as eagerly as we were attempting to present our case, so our opponents, both from the Air Transport Association and, I am sorry to say, from some elements within the services, were attempting to present theirs. On one occasion, an important paper was conveniently lost—we at MATS felt—in the Department of Defense. My deputy, Bunky Reeves, practically made the accusation. A functionary who was responsible for the paper bridled and demanded if Reeves was calling him a liar. This all happened in private conversation.

"If the shoe fits, wear it," Bunky snapped. Though new to it, he had become a real transport man.

Despite such wrangles, the events of that hectic period brought out much of what is good and right in our American system. A good deal of our opportunity to present our side of the controversy before Congress resulted not from our direct efforts to get our case across as much as indirectly from the pressure of the opposition. For our senators and congressmen did not accept without question all they were told by the opposition's lobbyists. Rather, they gave a thorough hearing to both sides, even though it meant an exhaustive amount of time and study. Thus it was that the esteemed chairman of the House Committee on Armed Services, Representative Carl Vinson of Georgia, deemed it advisable to make a complete study of the entire airlift situation. In keeping with the decision of the full committee, Chairman Vinson appointed a special subcommittee under the chairmanship of Representative L. Mendel Rivers of South Carolina to undertake the study. Hearings began March 8, 1960, and continued regularly until April 22. Witnesses began with Deputy Secretary of Defense James Douglas, Secretary of the Army Wilbur Brucker, and Secretary of the Air Force Dudley Sharp, and continued until over sixty witnesses had been heard and numerous lengthy reports presented.

Just as the committee set out with the firm and patriotic resolve to determine fairness and the facts, so did our Air Force co-operate fully with the same spirit. There was no question but that much of the opposition to MATS within the Air Force came from dedicated men who were steadfastly and resolutely convinced that the very existence of the nation depended completely upon a strong nuclear deterrent force, and that any additional allocation of already scarce funds to air transport would weaken our military posture in this time of great international tension. Knowing this full well, and not wishing to step out of line with the official wishes of the Air Force, I went to the Chief of Staff, General White, to ask for guidance.

"As you know, General," I said, "I am a strong believer in the fact that we need an air transport force, and that we need more money for the modernization of that force. We need to hold on to what we have, and to go forward with modernization. But I want to make sure that my

testimony to this effect before the Congressional committee will not run counter to the wishes of the Air Force."

General White looked at me levelly for a moment, and then he said, "Bill, some people here on the staff don't approve of your position, it's true. But the fact remains that you are the boss of MATS, you have been with it for many years, you see it more closely than anyone else, and I think you will come up with the right answers. When you go before Congress, you say what you think, and you'll be all right."

We presented a full-scale briefing of several days' duration. The report of the committee was not forthcoming for several weeks, for in the middle of the hearings there was a full-scale diversion. When I had first taken command of MATS, I had noted that, though our personnel seemed to be doing their jobs diligently, there seemed to be a lack of *esprit de corps,* the all-out enthusiasm I liked to have in my command. Morale improved as we went along, but we needed some dramatic operation to buck up our personnel, get them on their toes—something like the Air Forces Day on the Hump, Easter Parade in Berlin. It also seemed obvious that we needed some practical application of our mission. Flying our planes five hours a day on routine flights was not a real application of what we would actually be called upon to do in event of war. A full-scale maneuver, a military exercise, was clearly called for. One of our primary missions would be to move troops, complete with equipment, to a trouble spot overseas. Thus I envisioned for our maneuver the airlifting of a large body of troops to Panama or the Philippines, say, or to Europe. Such a maneuver would not only give both MATS and the new Strategic Army Corps vital training for their wartime mission, but would accelerate the interest and enthusiasm of our own people in this practical application of our reason for being. Further, if done on the scale I envisioned—and I wanted to do it big or not at all—the maneuver could not fail to attract the attention of the press and the public to MATS in specific and to the potentialities and shortcomings of air transport in general.

My budget officers estimated that the maneuver could be executed for about $10,600,000. Though miniscule in comparison to the eighteen-billion-dollar budget of the Air Force, for a combination of two such out-of-style concepts as air transport and preparation for limited wars as opposed to the Big Bang, this was a large amount indeed. When I first

proposed it, Curt LeMay, then vice chief of staff, advised me bluntly to forget it—there were no Air Funds available that could be diverted to a transport maneuver.

Perhaps a more tractable commander would have accepted this sage advice. I did not. If the Air Force would not give me the money for the maneuver out of the general military fund, why, then it would be necessary to go to Congress to get an amount especially earmarked for such a maneuver. The fact that Congress, at the time, due to the constant hammering of the airline interests, considered MATS a giant boondoggle only made the impossible proposition a little more difficult. Just getting before the pertinent subcommittees would be a major operation. However, I was helped in my project by the airline lobbyists themselves. So much pressure was put on Congress to shrink MATS down to nothing that these gentlemen, in fairness and wisdom, called upon us to defend ourselves. In so defending, I also asked for money for the maneuver. Apparently the sheer effrontery of the request must have intrigued the lawmakers, for this time $10,600,000 was actually earmarked for the exercise. The place, Puerto Rico, was designated by higher authority. I would have preferred Europe, or Panama, for the greater distance would have provided a real test, but any place was O.K. with me. I was so grateful for the opportunity to display our wares that I would have settled for the Gobi Desert.

And now that I had the money to transport troops to Puerto Rico, I needed troops. Fortunately, General Lyman L. Lemnitzer, the Army Chief of Staff, was an air-minded Army General, who had become convinced that air transport was vital to the United States Army. From then on, the Army worked closely and faithfully with us. General Bruce C. Clarke, who had served as commander-in-chief of the Army in Europe when I was commander of the Air Forces, was then commander of the Continental Army Command. Our first meeting was at Clarke's headquarters at Fort Monroe, Virginia. After we had discussed plans in general, he mentioned somewhat proudly that he felt he could give five thousand Army troops for the maneuver.

I sat up straight in my chair. "I was counting on at least thirty thousand," I said.

"Where would we get them from?" he asked. "Maybe we could get eight thousand, but that's tops."

I went back home and thought this matter over. My staff and I discussed it at length. With a maximum of eight thousand troops, we figured, the maneuver was not worth the effort. We needed to move at least one division to make it all worth while. If we could not run a big operation, with our planes flying at a greatly increased rate, simulating war, and thus hauling thousands on thousands of troops as well as guns and trucks and ammunition and food, there would simply be no point in having it. I called Bruce and told him that I would appreciate the opportunity to come down and discuss this question some more. He said that it would be impossible for him to be there on the day I proposed, but that he would gather his staff and field commanders together to meet with me. When I arrived, I found Clarke's chief of staff, a lieutenant general, acting as chairman of the meeting, with high-ranking officers from Fort Benning, Georgia, Fort Bragg, North Carolina, and Camp Campbell, Kentucky. They agreed that by scraping the barrel they could furnish a total of fifteen thousand troops. All other personnel were in special schools, or were new recruits, or just weren't in the Army.

"I've been thinking this matter over," I said, "and I can see that perhaps my original estimate of thirty thousand men was high. However, I do feel that we need over twenty thousand troops to make this operation meaningful and worth while. Now you have fifteen thousand men. I wonder if you would mind if I were to go to the United States Marines and ask them if they could provide five thousand people for this maneuver. That would give us twenty thousand."

For a full minute there was not one sound in that room. I don't believe anyone breathed, much less spoke. Finally, the Chief of Staff cleared his throat. "I think," he said, "that the Army will find you twenty thousand men."

As it turned out, the number was twenty-one thousand. Troops were brought in from as far away as the Pacific Northwest and Hawaii, and the force was augmented with the Army Reserve and the National Guard, but we wound up with a meaningful quantity of men to work with.

From the very beginning, the joint exercise proved to be most fruitful in both training and application. It was known as "Operation Big Slam/Puerto Pine." "Big Slam" was the name given the MATS portion of the joint exercise; the mission, stated succinctly, was to evaluate MATS ability to surge to a high utilization rate and transport an Army

force to Puerto Rico and return. "Puerto Pine" was the name given the Army part of the maneuver. The true significance of the Big Slam operation lay in the fact that during a period of fifteen days we would be performing two jobs. First, we would continue our routine, round-the-world flights with no disruption whatever to schedules or tonnage. Second, on top of this, we set out to transport an Army force consisting of 21,030 troops and 11,096 tons of cargo, a mission originally evaluated as requiring approximately 1,269 outbound trips from the various onload bases within the United States to the staging area in Puerto Rico, and the return. This would require a surge from the peacetime utilization rate of five hours per plane per day to a rate of eight hours per plane per day for a period of fifteen days.

Many long hours of planning went into the joint operation long before the first teaspoon of gas was burned. The Army, for example, had to plan the movement of the STRAC units from twenty-seven United States Army posts and stations to the fourteen onload bases. Similarly, my staff at MATS was charged with consolidating the 447 aircraft we would use —291 C-124's, 107 C-118's, 56 C-121's, and 29 C-133's—at these bases. (Our entire fleet had to be scheduled so that a specific number were on stand-by for SAC and others were performing our routine flights over the world.)

The actual maneuver began March 14, 1960, and continued for fifteen of the most exciting days I have ever spent in a training exercise. From the moment the first soldier stepped on board the first transport to leave the Continental United States until the last man marched off at the conclusion of the exercise, MATS personnel put on a display of efficiency, excellence, and devotion to duty that would make any commander's heart thrill with pride. Nor were my men operating in a vacuum. The drama and enormity of the maneuver attracted VIP's from both the military and the Administration, as well as observers from other nations. Many senators and congressmen came to Puerto Rico to see the airlift function at first hand. It took the fancy of the press of the nation and the world to the extent that there were no less than 352 representatives of the press covering it in Puerto Rico alone. "You got more correspondents here than were at the invasion of Normandy," one of them told me wryly.

When it came to putting on a show, we didn't let them down. Depend-

ing upon the viewpoint, even the weather could be said to have co-operated. During several days, the en-route weather was absolutely atrocious. A strong frontal system developed at sea parallel to the coastline from the Caribbean right on up the eastern seaboard. The turbulence was particularly violent at mid-altitude, between fifteen thousand and thirty thousand feet. I was in a C-118 flying at eighteen thousand feet when we suddenly hit this turbulence. Never in my flying career, not even on the Hump, had I ever experienced such violent gyrations of the airplane. The pilot had to fight the controls with all his strength. For the soldiers in the C-124's it was both frightening and embarrassing, for even veteran airmen became airsick. They were mighty happy to land. So were the pilots. I checked with several coming in, and many showed me hands covered with blisters. Yet these men turned right around and flew back through the turbulence again. This was their job, it was what they were trained to do and paid to do, and they did it well. Their bleeding hands comprised the highest tribute to air transport in general and to the Military Air Transport Service in particular; they proved their own *esprit de corps* and dedication to their service.

Much as I would like to dwell on the drama and heroism of Operation Big Slam/Puerto Pine, this is one case in which statistics best tell the story. In the entire operation a total of 1,250 round trips were flown, over distances of up to 4,130 miles (McChord AFB in Washington State). Flying hours totaled 50,496. A total of 21,095 troops were airlifted to the staging area in Puerto Rico and returned, and a total of 10,949 tons were transported out and returned. And all this time our other missions continued.

Many lessons were learned from the exercise, lessons which might conceivably mean the difference between victory and defeat in the event of war. First, the exercise validated previous experience in MATS in regard to the essentiality of the requirement for a minimum-readiness training rate of five hours for the bulk of the MATS strategic airlift force. During this entire period, our personnel worked to the limit of their endurance—twelve hours a day, eighty-four hours a week, or more—to accomplish an increase of only three hours in the utilization rate. This was a clear answer to those critics who, with little or no knowledge of the complexities of airlift, had held a position that MATS

could train adequately with a utilization rate of only one or two hours per day. You just can't turn on a substantial increase overnight.

The practicality of augmenting MATS' routine airlift by commercial aircraft was proved, for this we had done; CRAF planes had flown some of our routine military schedules across the ocean in order to release MATS planes to Big Slam. However, the exercise also showed that the use of commercial aircraft and crews in a specific military exercise, or in emergency operation to potential hostile areas, would not be feasible. We could not have increased the working time of our civilian crews to the same extent we increased the working time of our military crews. Further, the flexibility of the military crews was demonstrated when Navy-operated C-121's were forced to overfly their own base and land instead at an Air Force base. The Navy crews had flown the maximum time allowable for safe operation. However, Air Force crews took over, and the aircraft continued on without delay. If these had been civilian planes, they could not have had such flexibility. Maintenance would also have been a problem.

The MATS flying-safety program was completely validated during the course of this exercise. Even extremely adverse weather did not seriously interrupt the performance of the mission. There was not one flying accident, not one fatality, and only one injury classified as serious: a STRAC soldier was shaken up in the turbulence. As far as the quality and effectiveness of the MATS flying safety program was concerned, the record spoke for itself.

All these, as well as a dozen or more technical points which I have omitted but which have been lengthily discussed in technical journals, proved the capability of MATS personnel to do the job.

But this was only one face of the coin. What about the capability of the *equipment?* My Army friends Lemnitzer and Clarke and I had taken a calculated risk. We were convinced that, while our personnel would prove themselves, our equipment would not. It would be insufficient in number, obsolete in quality. And we banked on the perspicacity of military observers and military experts of the press to perceive this imbalance.

And they did. Our hopes were fulfilled. As Ray Towne put it, "This operation was the most spectacularly successful failure in the history of military training."

Almost from the beginning it was obvious that our men and planes were doing a good job. Our aircraft were coming into the staging area at intervals of slightly under four minutes. Troops poured out, cargo was unloaded, and the planes gassed up and went back for more. Observers could see that it was a smooth and efficient operation.

In spite of the efficient operation, the deficiencies became more and more apparent. As Richard Fryklund, of the *Washington Star,* wrote in the first week of the exercise:

> The biggest Army–Air Force Strategic Airlift in history, going on now between the United States and Puerto Rico, seems to be a demonstration of inadequacy . . . the Air Force planes being used are too few and too old. And much Army equipment is too big to be carried by air. Despite the fact that this exercise is a record breaker . . . the force trickling into Puerto Rico is a rather weak one . . .
>
> If the men were being sent to fight a small and poorly equipped enemy not too far from home base and if time were not too important, the airlift would be a success. But if the Army had to fight a substantial force a long distance away in a hurry, it would be in trouble.
>
> This is not to criticize the men engaged in *Big Slam/Puerto Pine,* the airlift exercise. You cannot stand by the runways of Ramey Air Force Base and Roosevelt Roads Naval Air Station in Puerto Rico and watch the planes roll in like clockwork and the troops unload and move smoothly to dispersal areas without gaining respect for the soldiers and airmen.

In spite of our all-out efforts, it soon became clear that the airlift carried in less than a third of the equipment that would be needed to make the troops combat effective. Out of the ten thousand-odd tons of cargo we brought in, there was only one light tank, few vehicles—some with empty gas tanks to lighten the load—and little artillery. Many troops were landed without a single round of ammunition.

The significance of Puerto Rico's proximity to the Continental United States became more and more pronounced. If we were having this much trouble getting equipment to this island less than a thousand miles from the mainland, what would we do in the case of a conflagration in Europe, the Middle East, or Asia? Our planes—slow, old, and

of short range—would not be able to reach such trouble spots except by island-hopping. In the all-too-possible event of all-out war in Asia, these convenient stepping stones might not exist after the outbreak of hostilities. Even then, as military observers were quick to point out, MATS' primary D-Day mission is the re-supply of the Strategic Air Command and the Tactical Air Command, and it is only after its responsibilities to these commands are met that it can undertake troop movements. It was estimated that the initial airlift in the event of war could put down only one or two companies, a force too small to hold a bridgehead. It would take at least a month to move in a full division with re-supply.

Senator Dennis Chavez, chairman of the Defense Department Subcommittee of the Senate Appropriations Committee and the first member of Congress on the scene, told the press that he was deeply impressed with both the efficiency and importance of the operation.

"However," he went on, "I am concerned about the outdated aircraft we are now forced to use. Some were placed in service in 1948, twelve years ago. They have already outlived their planned useful life. I realize that a deficiency in MATS airlift force does exist. I do not believe that we have sufficient modern military airlift aircraft for the needs of the world in which we live today. It is a fact that both Congress and the Administrative branch must take prompt action in this area of national defense."

Big Slam/Puerto Pine received extensive coverage from the small army of correspondents on hand. Papers in 1,081 cities, according to Ray Towne's calculations, carried a total of thirty-three thousand columnar inches of copy and photography on it—an amount equal to eleven daily issues of *The New York Times.* Speaking of the *Times,* its distinguished military analyst, Hanson W. Baldwin, wrote a lengthy three-part background story on military airlift in addition to his on-the-spot coverage.

The unannounced and unofficial mission of Big Slam—to prove we needed more and better planes—also received full treatment in the press. Just before the maneuver it had been most fashionable for newspapers and magazines, if they bothered to mention MATS at all, to attack it as a bureaucratic waste. Now, with 352 correspondents pouring out the facts from the scene, the emphasis changed abruptly. The news columns pointing out the need for increased airlift were followed

by editorials strongly advocating it. *Time* magazine, for example, which not long before had joined in the sniping, now printed a highly favorable report of the maneuvers. Its full-length article pointed out that the Rivers subcommittee had passed a motion to press for funds for the modernization of MATS, and concluded with the strong editorial comment: "It seemed none too soon." The generally favorable *Saturday Evening Post* article by Clay Blair, Jr., mentioned earlier, also received its original stimulus from Big Slam/Puerto Pine.

Less than a month after the maneuver had ended, but after we had made a thorough evaluation of the exercise, I was once again summoned to Washington by Congressman Rivers. He had, of course, been a diligent and perceptive observer, and I am sure the maneuver made a great impression on him and his fellow committee members. Bruce Clarke joined with me in presenting a formal report to them. In it we said, in part:

"Limitations of the majority of the present MATS aircraft seriously limit the size of the United States Forces which can be deployed to distant overseas destinations in acceptable periods of time."

When Rivers asked me specifically why, I told him bluntly: "Because it took so many airplanes and so much effort to do so small a job."

I would like to be able to give the report of the Rivers subcommittee in toto, but unfortunately, its very thoroughness makes this impracticable. Here, paraphrased, is a summary of the subcommittee's recommendations pertaining to airlift.

First, it concluded that our strategic airlift capabilities were seriously inadequate. To overcome this deficiency, the committee recommended that a work-horse aircraft of the type I recommended be developed, and that such aircraft should, to the maximum extent possible, be compatible with the economic transportation of civilian cargo by civil airlines. An appropriation of fifty million dollars was recommended for this purpose. In the meantime, the committee recommended the augmentation of the fleet with one hundred off-the-shelf aircraft, fifty K-135 type, fifty C-130 B type.

The committee called attention to the various "private airlift" operations within the DOD and recommended that they be brought under centralized control.

It recommended that the utilization rate be established at not less

than one-half the surge rate required for war. MATS should, "in the performance of its peacetime utilization rate, continue to transport military traffic, first, in justification of meaningful training, and secondly, as a matter of economy."

The Civil Reserve Air Fleet should be augmented with modern long-range aircraft to supplement but not replace MATS.

There could be no question but that the excellence of this thorough report of the Rivers committee—which by no means slighted the participation of the civil airlines in the over-all program—was greatly instrumental in enabling the Military Air Transport Service to at least hold its own against its opponents and detractors. The earnest, soft-spoken South Carolinian pushed hard for a special appropriation to start on the MATS modernization program. In the upper chamber, Senator S. Mike Monroney, like Rivers a thorough student of aviation, but who had earlier opposed us, now also pledged his support.

And suddenly the hue and cry of the civil airlines was no longer heard in the land. One reporter, Richard L. Mourey, made an analysis of the situation from both the facts at hand and from the sudden quietude from the ATA front, and expressed it this way in the story printed in the *Hartford Courant* April 17, 1960:

> Now that the issue has been cleared of airline meddling in a problem concerned purely with national security, the modernization program should move forward at full speed.

Important as was this victory with the resulting start, however modest, on a modernization program for MATS, straws in the wind during that period indicated a turning point in our military planning, our entire strategic concept. For years the Big Bang boys had been firmly in the saddle. Let me reiterate that I was then, and continue to be, a strong supporter of our nuclear forces. However, I felt that even as we poured a preponderant amount of our annual budget into preparation for general war, the big one, we were losing brush-fire wars all over the globe. In the modern world, only the swift transport of finely trained troops and tactical air forces could put down these brush-fire wars with success for the free world. Prior to Big Slam/Puerto Pine, the two forces which alone could guarantee this swift-strike potential, the Army and MATS, had not worked together for

their common good, and for the common good of the nation. Now, in the spring of 1960, we were finally together, as we should have been all along.

Further, the top brass in the Air Force, though adherents of the Big Bang theory, began to realize that air transport did have some importance in the military establishment. General LeMay, who had helped to make the Strategic Air Command the greatest military force the world has ever known, was sufficiently interested in air transport to fly to Puerto Rico to observe the exercise at first hand. General Nathan F. Twining, chairman of the Joint Chiefs of Staff and another well-known booster of strong nuclear forces, had forthrightly volunteered the information before the Senate Preparedness Committee that a shortage of airlift for limited war did exist, and advocated the modernization of MATS. According to an editorial in the *Washington Post,* "The Army Chief of Staff, General Lemnitzer, has made a compelling case before the House Armed Services subcommittee for an adequate troop airlift."

General Maxwell D. Taylor's book, *The Uncertain Trumpet,* with its strong advocacy of the build-up of limited-war forces, was being read and discussed. His erudite presentation and the points made so dramatically by Big Slam/Puerto Pine combined at this specific time to complement one another.

Although there was nothing I wanted more than to see the issue through, the time had now come for me to emulate General's MacArthur's famous old soldier and not die, but "just fade away." I had had a heart attack in the fall of 1957, while serving as Chief of Operations of the Air Force in the Pentagon. I had been given the opportunity to retire from the service then, but I couldn't bring myself to do it. I had hopes then of being the next commander of MATS, and I wanted to serve in that capacity no matter what my heart condition happened to be. It was the job for which my entire military career had prepared me. And with the aid of my staff and the many dedicated transport men in that command we did chalk up another successful mission.

In the winter of 1959–60 I again experienced some days of bad health, and this time the Air Force doctors strongly advised retirement. But again I couldn't quit, not with the Congressional hearings

and Big Slam coming up. I stayed on duty until the final evaluation of the maneuvers was completed and I had reported on the results of Big Slam to Congressman Rivers and his committee. I thought I had kept my retirement plans pretty well to myself. I was somewhat surprised, therefore, when at the conclusion of my testimony before the committee on April 21, Chairman Rivers laid down his gavel, looked me in the eye, and said:

"General Tunner, you have completed your testimony before this special subcommittee, and apparently will not appear before us again, so I have a few remarks I would like to make while you are still with us.

"If there is anyone in America today who has justly earned the title of 'Mr. Airlift,' I am sure it is you. When we realize that the airlift over the 'Hump' in World War II, the Berlin Airlift, and the Korean Airlift were all under your command, and owe the greater part of their success to your leadership and endeavors, it would be strange indeed if any other name should even be suggested as your equal in this important field of military endeavor.

"By the very nature of things, it has not been easy in recent years to carry the banner of MATS. Crosscurrents both within and without the military services have made your voyage rather stormy. And I know it has been a matter of concern and keen disappointment to you to see the MATS fleet age into obsolescence. But you have fought a good fight and, at long last, it looks as if the help which has been so elusive in the past is about to arrive in the form of interim modernization for MATS as well as a firm program for the future.

"I am not one who counts dividends before they are declared. But I sincerely believe that the Congress is going to provide the relief which is required, and I sincerely hope that the Executive Branch will join us in our attempt to solve the airlift problems. That is the result which both you and we earnestly seek.

"So, General Tunner, we commend you for a job well done and wish you well in your future endeavors."

I left the committee room with these words ringing in my ears. Shortly after, I retired. Counting the four years at West Point, thirty-six of my fifty-three years had been spent in the military service.

CHAPTER IX

Observations and Recommendations

LIKE millions of other civilians throughout the United States that March afternoon in 1961, I settled down comfortably before the television set for President Kennedy's press conference. Though I couldn't help but miss the excitement and opportunity for service and accomplishment that I'd known in the military service, all was reasonably well with my own little world. Both my sons were doing well; Bill, Jr., had graduated from Washington and Lee University and the University of Virginia Medical School, and was now serving his internship. Joe was an undergraduate at the University of Virginia, doing well in his studies and planning to enter law school after graduation. After several years of widowerhood, I had married a charming young lady, Ann Hamilton of Enid, Oklahoma, who by coincidence had served under my command as a pilot in the WASP during World War II. Now, as our pert little daughter, Suzanne, did her homework, Ann came in to join me in front of the television set. Together we awaited the entry of the President into our living room.

I couldn't help then but feel a bit of personal pride in our new President. During all my years in the service I had deliberately stayed away from any involvement in civilian politics. I had been a professional soldier in the employ of a great democracy; I strongly believed in the American principle that the military is and should be the servant of the electorate. Thus I had never voted. As a brand-new civilian, therefore, I found in the presidential campaign of 1960 more than the normal interest any citizen should take in his country's most important election. I also found in it something of the excitement of discovery. It was fascinating, and I followed it closely.

One of the major issues of the campaign was military preparedness,

and I naturally used it as one of the yardsticks to measure the two candidates. They came out most unequal. The Republican candidate, Richard M. Nixon, was running on the record of the Eisenhower Administration. Knowing something about the military record of the Eisenhower Administration, both in my own specialty, air transport, and in the broader aspects of operations and concepts of the Department of Defense as a whole, I felt that Nixon was carrying a pretty heavy handicap in this race. The Democratic candidate, Senator John F. Kennedy, on the other hand, had no such restraint. In his speeches and writings he constantly criticized both the Administration's national defense policies and the execution of those policies, and made intelligent proposals for improvement.

Several times during the campaign Senator Kennedy referred specifically to the inadequacies of our military airlift. I was impressed by his knowledge of this complicated subject. He had not been on any of the committees before which I had testified, yet it was obvious from his thorough and confident familiarity with the issues that he had followed the matter closely. I could not help but be impressed. I never did hear Nixon mention airlift or tactical air power or comment on warfare preparations. Kennedy, on the other hand, insofar as these vital matters were concerned, diagnosed the situation correctly, prescribed the proper cure, and promised to administer it.

Thus, when at the age of fifty-four I went to the polls for the first time in my life, I picked a winner my first time out. In this area of military thinking he did not disappoint me. In his first message to Congress, President Kennedy announced that he had directed Secretary of Defense Robert S. McNamara to take prompt action to increase airlift capacity. Still, as I settled down in front of the TV set, it had not been made clear exactly how this increase was to be accomplished. That is why I suddenly found myself sitting bolt upright in my chair. It seemed as though the President was talking directly to me. For out of the blue came his announcement of a billion-dollar program to build the plane I had fought for and to modernize our airlift fleet at an additional expenditure of millions of dollars.

There, within a few seconds, the sweat and anguish of years were suddenly wiped away, and it all became worth while. It was far more

than a personal vindication; this was a vital strengthening of America in the very area where it was most needed.

The official designation of the new work-horse plane is the C-141. America will eventually have over a hundred of these planes. Lockheed Aircraft Corporation, which also builds the dependable C-130 Hercules, is building the C-141 at its plant in Marietta, Georgia. Secretary McNamara described it as "The airlift aircraft we've been waiting for, and we intend to standardize on it for the heavy lift requirement." Although compromised in some particulars, for commercial use, it had most all the features I wanted. A giant of a plane weighing 316,000 pounds, it will carry an 80,000-pound payload across the Atlantic nonstop, carry two thirds of that across the Pacific nonstop. Its four turbofan engines will pull it along at a maximum speed of 550 miles per hour. It is a high-wing plane with a rear-loading ramp at truck-bed height. The contract called for the delivery of the first planes in mid-1964.

The C-141 is more than just a plane. It signifies the return of our entire military program from almost sole emphasis on all-out nuclear war to the more practical preparation, in addition, for the localized conflicts the free world constantly faces all over the globe. Sooner or later, our government leaders would have realized the necessity for this changeover, but I'm sure it was hastened by our activity in MATS and the Big Slam/Puerto Pines maneuver.

This enormous figure allocated to the development and manufacture of just one type of aircraft should underscore dramatically a point I have been attempting to make all through this book: the growing necessity to consolidate all military cargo planes under one command.

When I first became involved with military air transport, the best plane that could be bought, the wonderful Douglas C-47, cost thirty-eight thousand dollars. Today, our new C-141's cost ten million dollars each. This explosive increase in the cost of our work-horse aircraft should certainly point out the long-overdue necessity for consolidation. The military has long purchased, with approval of Congress, transport airplanes for those services and commands which could defend their needs. In years gone by, this was a reasonable policy insofar as it pertained to airplanes, and still is for many items; but today, with this great increase in the price of transport planes, this policy should be re-examined in regard to airplanes. Airlift, rather than airlift air-

planes, must be allocated to those commands which need it. To scatter thousands of expensive aircraft, complete with crews, maintenance, and spare parts throughout the entire military establishment has always been an inefficient and expensive waste of men, equipment, and money; today it is impossible. Over and over again, for twenty years now, I have seen our great American air transport capability hamstrung by inefficient utilization of aircraft. I first saw it in China, where General Chennault clung to his cargo planes with all the tenacity with which that great fighting general was capable. Those planes, inadequately manned and supplied, frequently sat idle while in the India-China Division we were driving equipment to the breaking point. We had the same problem of getting enough planes during the Berlin Airlift, for Operation Swarmer, and for the Korean Airlift. During my first months as commander of MATS, it was necessary for me to dispatch 48 C-124's to my former command, United States Air Forces in Europe, to help out in the Lebanon crisis. When that situation cooled down somewhat, and the Formosa operation was going full blast, I approached USAFE to request the return of some of the planes temporarily assigned there. Despite the fact that I thought there was no urgent need for them in that theater, and there was elsewhere, USAFE would not relinquish them. The command was looking at only the local picture. It might need them. It didn't seem to realize I had the capability to return them in a hurry if the situation there really did require them. At any rate, I could not pry them loose. I did borrow planes from the Air Materiel Command and from SAC, but these planes were inadequately equipped with crews and with specific spare parts. (They were of a different model.) We could not get full utilization out of them. And in the meantime, good C-124's were in Europe sitting on the ground or, at best, flying low-priority missions.

In a country known the whole world over for efficiency and know-how, this situation is doubly extravagant. Today the efficient operation of airlift is a science carried out by trained and dedicated experts in air transport—*professionals*. In commands other than MATS, transport planes are usually administered by combat-trained officers who do not understand airlift and aren't particularly interested in learning this difficult and different specialty. Result: Planes with tremendous capacity standing idle, all over the world. These planes now have such a

vital mission they deserve to be managed by a senior commander and an experienced staff whose whole thinking is devoted to the airlift mission, such as we find in MATS today.

It would be a natural assumption on the part of the public that the majority of air transport planes would be in the air transport service. This is not the case. Transport aircraft are so scattered throughout the Department of Defense that it is impossible to say just exactly how many of these planes there are, and where and under whose command they can be found. It is safe to say that there are more transport planes in the Department of Defense which are *not* in the Military Air Transport Service than there are *in* it! These planes are assigned to the Navy, the Marines, and even to many other commands of the Air Forces. Over 350 troop carriers are assigned to the Tactical Air Command. If you think there is no connection, you are right; there is none. No matter what you call these planes, troop carriers or anything else, they are air transport, and it makes little sense for TAC or any other command to control this great potential. Not only by nomenclature, but by training and dedication, the officers of the staff of TAC are combat men, with their thoughts properly directed, first and foremost, to the combat mission of that command, to fight with bombs and guns. Troop-carrier aircraft are not combat planes, but transport. Their mission is not to destroy the enemy, but to deliver troops and equipment safely and efficiently. Thus occurs the paradox of men trained for one unique military specialty administering equipment designed for another, functionally and philosophically different.

To reorganize military airlift properly would require the attention of the Joint Chiefs of Staff, the Secretary of Defense, or both. All transport planes in the Department of Defense—Army, Navy, Marines, as well as all Air Force—should be placed under the command of a new force. Probably it would be good to rename it the Military Airlift Command—MAC, as suggested by Mr. Rivers. There would be no question here, incidentally, of inter-service or intra-service rivalry; air transport men from both the Air Force and the Navy have been proving their ability to work together in MATS for over fifteen years.

MAC would be administered by the Joint Chiefs of Staff along the same principles on which the Theater Priorities Board was administered in Korea. All transport planes would be under this one command, and

would be loaned out to the other services in strength commensurate to perform the airlift missions of each service. These planes would be flown at a steady utilization rate. Rigid controls would be set up to recognize top-priority missions; valuable planes and even more valuable crews would not be placed on the shelf until the need arises to correct the mistakes of some supply officer. It is far cheaper, I assure you, to get a good logistics section in the first place. Fortunately today, logisticians in the Air Force, and the DOD as a whole, are better trained than ever before. We have high-class people, fully qualified, and mistakes should be at a minimum. Further, under such rigid controls, when the nation needs airlift for an immediate emergency, there would be no question of some commander holding on to hundreds of planes simply because he was too concerned over the local situation, too timid or too ornery to let them go. In short, in order to achieve a stronger defense, and to greatly reduce expense, I strongly recommend the consolidation of all transport aircraft into a single command. The savings to the taxpayer in this area alone would be enormous.

Though it may seem contradictory at first glance, I would further recommend that a special group of aircraft consisting of helicopters, airplanes capable of vertical take-off, and light transports capable of landing on rough terrain be provided the Army but be flown and operated by the Air Force. Flying is the Air Force job. I do not advocate the growth of a new Army Air Corps with its expensive duplication of flying schools, research, and air depots. Should it be necessary to move troops into battle overseas, the heavy planes of the airlift command would transport troops from the continent to a staging area close to the combat zone. At this point the men would deplane, be provided with food, rest, and exercise, and then board Air Forces-operated helicopters or light transports for the final, or assault, flight. This is the only practical way to move troops into combat over long distances. The idea that you can fly troops for thousands of miles across the ocean, join up with other aircraft in neat formations over the assault area, in fair weather or foul, and then, after many hours of flying without landing, drop combat troops in an orderly fashion, ready to fight, makes little sense.

The aircraft has brought a thrilling new ingredient to the fascinating study of military tactics. At West Point, and then on a higher level during my years working with the Infantry at Fort Benning, I shared

the enthusiasm of the Infantry officer for flanking and enveloping movements. Today, thanks to aviation, we have added an exciting new dimension, vertical envelopment. In the Swarmer exercise I talked with veterans of paratroop actions in Europe in World War II, and worked closely with the jumpers on maneuvers. Then, in Korea, I was closely involved with the 187th Regiment jump at Sukchon and Sunchon. From these observations I am convinced that the new tactic of vertical envelopment must be further refined. Save for a very few drops on special occasions involving small numbers of men, the parachute could well be forgotten in vertical envelopment. Think of all the great airborne assaults in the short history of vertical envelopment and tell me one paratroop operation that was a complete success? Surely not the drop on Sicily, or Normandy, or at Nijmegen. If there was one successful drop in all of World War II, it was the German capture of Crete. Even this was so costly, militarily, that the Germans never again had an effective parachute force.

Bill Bowen, who commanded the paratroops at Sukchon-Sunchon, told me that this was the most successful drop ever made. He presented me with a still-warm Russian-made carbine taken from a North Korean soldier as a token of his appreciation. I, too, felt that the Air Force did the best job it could on that operation, but a subsequent study of the operation has dimmed its aura of success. The end run with armored cars and tanks reached the drop zone so quickly that we questioned the necessity of the drop. Then too, of the 4,615 men who jumped that day, one man was killed and forty-six injured; thirty-eight of those injured had to be evacuated. In addition, several injuries were reported later by men who didn't want to admit they were hurt. Two of the injuries were broken backs.

Obviously, then, the regiment did not go into battle with a full strength of able-bodied men. As for equipment, two of the twelve howitzers dropped were inoperable, two of the four 90 mm. guns dropped would not work, four of twenty-eight jeeps were lost, and two of four three-quarter-ton trucks were lost. By contrast, we had airlanded this same regiment at Kimpo some weeks before. I had seen them go into combat in full strength, with a great deal more equipment and ammunition than we were able to drop at Sukchon-Sunchon—five thousand tons instead of three hundred. Compared

with Kimpo, that "best drop" at Sukchon-Sunchon was more of a waste of highly trained men and valuable equipment.

There are other serious drawbacks to vertical envelopment by paratroops. The special training paratroopers receive is most expensive. Further, in spite of the additional expense of this special training, the men come out of it prepared only for short, hard periods of fighting, not the long haul.

As for dropping materiel, I have already noted how in Korea we flew only a small per cent of the total flying time in air-drop missions; yet, because special and heavy equipment necessary for these air drops was installed on every plane, a very large per cent of the big airlift mission was penalized. Installation of this type of equipment is an unfortunate compromise in the C-141.

In modern war we will always need some air-drop capacity of both men and materiel, but the proportion should be very small. Due to their very excellence in selection, their enthusiasm for jumping, and their *esprit de corps,* paratroop officers will scream at this recommendation that what they so fervently believe in be curtailed. Nevertheless, the development of the helicopter and now the vertiplane has made the gallantry of jumping large units into battle of questionable value.

The tendency to cling to what one knows best seems to be particularly strong in the military. As Joseph Alsop, the well-known columnist, wrote in May, 1963, "It is in the nature of cavalrymen to believe in cavalry, bomber generals to believe in bombers, carrier admirals to believe in carriers. When the weapons they believe in become obsolete, generals and admirals usually become obsolete at the same moment, because they will not change their beliefs." He cited as an example the classic case of General Billy Mitchell, shot down by the Army's cavalrymen and the battleship admirals of the Navy.

I have been dismayed recently by the action of retired senior admirals and generals, men who supported General Mitchell years ago, and men whom I greatly respect today, attacking with almost vicious vituperation Secretary McNamara. It is true that under McNamara the Air Force lost several important decisions: the abrupt termination of the Skybolt missile; the virtual termination of the RS70, the planned supersonic manned bomber; and the consolidation of Air Force and Navy plans for separate jet fighters into one plane, the TFX.

Though I feel that some of McNamara's decisions should have gone the other way, I still defend the Secretary's right, more properly obligation, to render a decision. Operating in the vastness of scientific knowledge of today, it is far from easy to make such decisions. It would seem that the analysis, determination, and courage necessary would be admired by military people rather than scorned. It is in the sound American tradition that the military remain under civilian control, and in McNamara we got a pretty strong civilian. It was none too soon.

The whole question of civilian versus military control, and the life story of Robert Strange McNamara, are beyond the scope of this book. I do feel qualified, however, to comment on one criticism made of McNamara or any other civilian official—his comparatively short period of military service. McNamara served less than three years as an Army officer in World War II, assigned to the thought-provoking, brain-stretching area of statistical control. The fact that he did not serve many more years in the military, putting in his stint in such intellectual assignments as mess officer or adjutant or PX officer, or boring holes through the sky in formation flying, would not disqualify him from making a decision bearing on national strategy.

Over the years I have found that men from civilian life make excellent military personnel with little prior training. I have known and worked closely with scores of such men, but a few names come immediately to mind—C. R. Smith, Temple Bowen, Hammie Heard, Gordon Rust—all brilliant and dependable men who served their country well in uniform. Some of our greatest military leaders in World War II and subsequent years were not from the academy. Among the names that come immediately to mind are General George C. Marshall, General Curtis LeMay, Chief of Staff, USAF; General Thomas S. Power, commander of SAC; General John K. Gerhart, commander of NORAD; Lieutenant General Harold L. George, commander of the ATC in World War II, and Lieutenant General "Chesty" Puller, a great Marine.

In air transport we have always had to get along without many graduates of the service academies. When I commanded the Hump, less than ten of the seven thousand officers under my command were West Pointers. They were all excellent men, but their efforts were overshadowed by the excellent work of thousands of others.

The service academies do indeed provide a vital ingredient to our military establishment, a solid but small core of professional men to carry on the continuity of the services. For the rest, however, I believe that our colleges and universities turn out a fine product on whom the nation can call with assurance when the DOD and Congress determine the method. From my own personal experience, therefore, I believe that proposals to expand the enrollment of the service academies could well be questioned.

Also on the strength of my own personal experience, I would minimize the machine record system in the selection of personnel. As a commander who recognizes that the success of his major operations has been due largely to the enthusiasm, intelligence, and energy of staff members, I strongly advocate the selection of personnel through personal knowledge rather than by machine. A commander should have great leeway in selection of his key staff, *particularly when the command has an urgent mission.* I have always tried to fill my immediate staff from people I knew personally—men who could and would produce, men who were able and completely trustworthy, men who had the peculiar technical knowledge needed. At times, however, I had to take men chosen by the machine, whom I did not know, for key positions. Usually these men proved to be quite capable, but on the occasions when they were not, the success of the mission was impaired, and others had to take on their jobs as extra work. It often takes a few months to determine whether a new and unknown addition to the staff will fit in and be able to produce; during this period the commander, who in his vital position carries the full responsibility, and others on the staff, can hardly have complete confidence and trust in the new man. From my own experience I am convinced that time can be saved and the chances for the success of the mission improved by permitting the commander to choose his own men through his own knowledge of them rather than have someone sent in by a machine.

Just as the commander should have the privilege of personally selecting his staff, so should he also have full control of both personnel and equipment. In both the Berlin and the Korean airlifts my job was made much more difficult by divided authority. Today we hear much of the new, highly touted United States Strike Command (STRICOM) and its military potential. In an actual campaign, however, the commander of

STRICOM might find himself operating under the same handicaps I faced in Berlin and Korea. For STRICOM is an *operational* command only. It draws its men and equipment from the Continental Army Command and the Tactical Air Command, both of which retain logistic and administrative responsibilities. This limited command may function well during maneuvers and short exercises, but after two weeks of operating under such an over-balanced operational setup, STRICOM, or any other command, would run into trouble.

I learned on the Hump that if the commander takes an interest in the welfare of his people, providing them to the best of his ability with decent living conditions, food, and recreation, they in turn will take care of his mission. Loyalty should extend both ways. In this regard, I have always opposed rotation programs which send personnel overseas for long periods of time without their families. Today most of our officer and senior noncommissioned personnel are married; less than 20 per cent of our pilots are single. When you tear an American from his wife and children for six months every two or three years, you can hardly expect him to give you his best in return, or to remain in the service. Thus I heartily commend the recent order of the Secretary of Defense terminating the six-month rotation plan, and strongly recommend that his new policy be continued.

Let me make it plain that I am not proposing any large withdrawal of troops from overseas stations. On the contrary, I believe that we should maintain a good, strong cadre of men and equipment in strategic places over the world. In case of emergency, these small professional forces could then be augmented speedily, through airlift, by troops from the zone of interior. But our personnel overseas should be permitted and encouraged to lead stable lives under the best possible conditions, and with their families.

Further, as long as American personnel are overseas, the fullest possible use should be made of them. Though I share the nation's enthusiasm for the Peace Corps, and wish the members of this dramatic new organization every conceivable success, I can't help but point out that America has been maintaining a potential Peace Corps in many countries of the world for years. I refer to the million-plus Americans who are already overseas—military personnel, civilian employees of the military, and the families of both. As our community relations program in

USAFE proved, this large army of Americans has a great opportunity to promote good relations in the countries in which they are stationed; in numbers alone, it is vastly superior to the Peace Corps. By all means, let's encourage the Corps and increase its numbers. But let us also encourage our people who are already overseas with the military to promote friendly relations and good will through both organized program and individual good fellowship.

I'm glad to see that some parts of the program we had in USAFE have been resurrected by the current DOD leadership. Emphasis on instruction of the language of the country is being increased, for example. But there's still a long way to go before we reach the comprehension of the all-inclusive and highly rewarding program in existence in USAFE from 1953–1957. This program was successful. Everything we did is a matter of record, and the salient points were consolidated into a comprehensive report. If any of our military or political leaders are interested in furthering good will overseas, all they have to do is dust off a copy and send it to the overseas commands.

Again, on the basis of personal experience, I would like to discuss the controversial B-70 project. This is the proposed manned bomber which would be capable of speeds up to twenty-one hundred miles per hour, research and development of which have been drastically curtailed. When I was deputy chief of staff for Operations in 1957, I studied this vast project carefully to the point that I considered myself completely knowledgeable on it. However, it is as a student of air transport that I wish to defend the B-70, now that the administration has stated both the necessity and the intention to develop a two-thousand-mile-per-hour transport airplane at a cost of about one billion dollars and has thus reopened the issue. More than two hundred million dollars have already been put into the research and development of the B-70—why duplicate both the result and expense? If we are going to have a supersonic transport plane, by all means let us build it on the solid framework of the B-70. We have historical precedent for this, particularly in the case of the modern jet liner, for the Boeing 707 evolved directly from the military tanker, the KC-135, and the tanker from the B-47 and B-52. Just as the research and development of those military planes paved the way for the production of the jet liner, so the B-70 can pave the way for this new supersonic transport. Accelerating the project will help us get the

supersonic transport sooner, as well as maintaining our manned bomber fleet—two birds with one outlay of money. It would be carrying on the dictum of getting there "fustest with the mostest" in both military and civilian application. Already American airlines are looking abroad for supersonic airplanes. We have always led the world in commercial aviation; this is no time to relinquish our leadership.

The greatest asset of this country is our technology, our industrial production, our tremendous capacity to turn out materials in peace or war. In the event of war we would be vastly outnumbered by the hordes of manpower the Communist world would throw in against us. It is our superior technology which alone can even up the battle. But if we are going to make maximum use of our superior technology, we must have mobility and flexibility. It would be ridiculous to fight the enemy always on a man-to-man basis. It is with the combination of superior technology and trained, intelligent men armed with its product, that we are equal to any hostile force in the world. But we must bring our superiority into play at the time we want, where we want it, and in the manner in which we choose to employ it. The use of mass air transport can assure us that we will get the most out of our most valuable asset.

Does air transport cost more? Only in the penny-wise, pound-foolish sense. To supply our fighting forces with any given item requires what we call a pipeline of supply. Supplies move through this pipeline at a speed determined by the means of transportation used. In World War II, for example, it took 106 days to get supplies from the United States to the combat commander in Germany—a rate of about one and a half miles per hour. Inasmuch as an infantryman could hardly shoot off a round of shells, then wait 106 days for the next batch to arrive, it was necessary to keep the pipeline continually full. Thus 106 days' worth of cartridges had to be constantly in transit, creeping along from factory to gun.

When I took command of USAFE in 1953, a typical aircraft engine would be in service for five months, then be sent back to a maintenance depot to be completely overhauled. For the next seven months, the engine would be in the maintenance pipeline, actually spending more time in surface transit and sitting in warehouses than in maintenance. We estimated that to fly this engine from the plane to the maintenance

depot and back to the plane would get it out of this maintenance pipeline three times faster.

Suppose there were ten thousand engines in a world-wide year-round operational maintenance cycle. Even if airlift would eliminate only one month of the cycle, we would save one-twelfth of ten thousand, or 833 engines. An engine could easily cost $200,000; airlift would save $166,600,000 right there.

Those of us in air transport worked hard to bring about the airlifting of such items, and we were largely successful, with, of course, savings in the hundreds of millions to the American taxpayer. But the Air Force still does not utilize airlift for high-cost items to the fullest extent. The Army avails itself of the economics of air transport for high-cost items still less, and the Navy is far behind.

Even so, the military services are leading the way in air transport; the civilian world is only beginning to grasp its economic implications. Some business leaders are beginning to awaken to the money-saving advantages of fast air delivery of high-cost items, but in general business lags far behind the Defense Department in this regard. Although the actual cost of transporting a ton by plane from A to B is no doubt more than by surface, that is far from the whole story. Costs pile up in the warehouse, in the trucks, and on the docks as well as in the ship or the freight car. Don't forget the extra costs for heavy packaging and special handling, the higher insurance, danger of pilferage, capital costs of the pipeline, and even the cost of obsolescence. Taking all these into consideration, air transportation for high-cost items becomes the most economical.

Of all goods moved through all transportation systems today, less than one-tenth of one per cent is moved by air. Government airlift contracts are let at a rate of about fifteen cents per ton-mile. Airlines now can show a good profit at this figure. With modern equipment, efficient operation, and full loads in both directions, airlines could show a profit at a rate of eleven cents per ton-mile.

Proceeding still further, such advances have been made in aircraft design that it is possible today to build planes capable of lopping still another four cents per ton-mile off this figure, bringing the rate down to seven cents. This figure happens to be the standard shipping rate for many items moved by rail or truck. What I am saying, then, is that it is possible, with efficient operation and with planes our aircraft industry

can build today, to compete directly with surface transportation in the shipping of many items. I think it is safe to assume that many manufacturers and many customers would, with the price being equal, prefer the advantages of air transportation.

Surely it is not unreasonable to postulate that, under such conditions, a total of one per cent of all goods shipped would be shipped by air. Yet such a modest figure is explosive in its implications. It would mean an increase of tenfold—ten times the number of planes, ten times the personnel, aloft and on the ground, ten times the investment, and ten times the return.

In my years with military air transport, I have seen the entire concept grow from a mere nothing to a vital military operation and a huge civilian industry. In comparison to the years ahead, however, the pioneers of air transport have but scratched the surface. We have brought air transport to a stable foundation. The young air-transport men of today and tomorrow will participate in the explosive expansion of this exciting complex to heights we never dreamed of. I wish I were starting all over again with them.

Index

Abadan, 53
Abbey, Col. E. D., 90, 92
Accidents; *see* Crashes and accidents
Ackerman, Rep. Ernest R., 6
Adams, Maj. Gen. E. S., 20
Adamson, Col. Hans, 30–32
Aeromedical evacuation
  AIREVAC (MATS), 284
  Hump Airlift, 117
  Korea (Combat Cargo Command), 238, 244–47, 253–57, 258, 263
  Wounded Warrior Airlift, 286
Air Forces
  5th (Korea), 231, 232, 233, 236, 241, 248, 259, 260
  10th, 60, 114
  14th (China), 63, 114, 116–24 *passim*, 130
Airlifts, 8–10
  Berlin, 152–55, 158–59, 162–224
  Chilean earthquake, 286
  Congo (United Nations), 286, 295–96
  Hump (Himalayan), 43–135
  Italy, 272
  Korea, 229–64 *passim*
  Lebanon, 281–82, 285
  Magic Carpet (Mecca pilgrims), 286
  Operation Big Slam/Puerto Pine (Puerto Rico), 307–13
  Operation Deep Freeze (Arctic), 286
  Quemoy and Matsu (Formosa Strait), 282, 285, 288
  Safe Haven (Hungary), 286
  strategic, 284
  Wounded Warrior, 286
Air Materiel Command, 26, 189, 190, 193, 289, 321
Airport construction, China, 49, 125, 130
Air supply
  Hump Airlift, 59–60, 62–63, 117, 123
    tonnage production, 112–16, 128–29, 130
  Korean War, 9, 228, 232–35, 237, 243–44, 247–48, 252, 255, 257, 258, 259–60, 263–64
Air Transport Association, 291–97
Air Transport Command
  European Wing, 38
  Ferrying Division, 28–42, 50–51
  India-China Division (Hump Airlift), 43–135
  Northern Division, 34
Albuquerque, N. M., 21
Alexander, Col. Edward H., 19, 22, 61, 62
Alexander, Holmes, 299
Allison, Charles G., 81
Almond, Gen. Edward H., 237, 253
Alsop, Joseph, quoted, 325
Amazon River, 32–34
American Legion, 291, 300
Arctic
  Operation Deep Freeze, 286
  "white-out" or "flying in milk," 34
Army Air Corps, U.S.
  Ferrying Command (World War II), 11–12, 19–28
Army Transportation Corps, 203, 204, 219, 222
Arnold, Gen. H. H., 18, 35, 38, 61, 130, 155, 156
Ascension Island, 29, 33
Ashiya, 231, 233, 234, 246, 251
Assam, 43, 54, 55, 60, 77, 82, 128
Atlantic Ferrying Organization (Atfero), 18
Attlee, Clement, 201–2
Austin, James W., 303
Azores, 53

Baker, Dr. George P., 303
Baker, Col. Robert, 44
Baldwin, Hanson W., 313
Baldwin, Rep. John F., Jr., 299
Barkley, Alben, 194
Barrackpore Base, 97

Bartek, Pvt. John, 30–32
Beau, Maj. Victor, 12, 16–17
Belém, 33, 34
Bennett, Constance, 209, 221
Berlin, Irving, 194
Berlin Airlift, 9, 152–55, 158–59, 162–224
  bases, American and British, 170, 172, 186, 199, 209–11
  coal, 159, 178, 182, 203–5, 207, 219
  Combined Airlift Task Force (CALTF), 186–89, 214
  flight procedures (corridors and routes), 170, 172–76
  key officer personnel under Tunner, 163–65
  maintenance problems, 164, 169, 182–83, 192–94, 196–97
  morale problems, 175, 176–79, 191–92, 194–95
  Navy participation, 214–15
  Operation Little Vittles, 207–8
  Russian harassments, 185–86
  tonnage figures, 159, 160, 180–81, 194, 198–99, 207, 209, 218, 222: Gung Ho Day (Easter, 1949), 219–22
  USAFE command difficulties, 189–97 *passim*
Berlin blockade, 156–58, 216–18
Bettinger, Col. Sterling, 152–54, 172, 175
Bevan, Ernest, 202–3
Bhamo, 59, 128
Birchard, Col. Glenn, 230
Blair, Clay, Jr., quoted, 297, 314
Bolte, Maj. Gen. Charles, 250–51, 303
Bonniley, Col. Richard, 131
Borklund, Bill, 299
Bowen, Temple, 64–65, 73, 88, 92–93, 156, 163, 326
Bowen, Col. W. S., 238, 239, 324
Brahmaputra River, 43, 45, 59, 128
Brazil, 20, 33, 34
Brenner, Sgt., 99
Brereton, Maj. Gen. Lewis H., 60
Brett, Maj. Gen. George H., 22
Brucker, Wilbur, 305
Buckeburg, 186, 210
Bunker, Col. William, 222
Burma-China air route; *see* Hump Airlift
Burma Road, 58–59, 129, 130
Burrows, Brig. Gen. Paul, 38
Burtonwood Maintenance Depot, 169, 192–93, 197, 276

Cairo, 53
Calcutta, 59, 60, 87, 96, 136, 137, 146
Campbell, Col. Lonnie, 131
Cannon, Col. Andrew, 32, 33, 69–70, 128, 131, 139
Cannon, Sen. Howard W., 299
Cannon, Lt. Gen. John K., 188, 189, 191, 195, 196, 209, 212
Cannon Project, 139–42, 143
Casablanca, 53
Celle, 170, 211, 221
Chabua Base, 43, 49, 63, 97, 98, 109
Chanyi Airfield, 78, 127
Châteauroux, 275, 278
Chavez, Sen. Dennis, 313
Chennault, Gen. Clair F., 62, 93, 116–24, 188
Cherry, Capt. William T., Jr., 30–32
Chiang Kai-shek, 60, 62, 116, 120
Children
  evacuation from Seoul, Korea, 262
  Operation Little Vittles, 207–8
  West German airlift from Berlin, 274–75
Chilean Airlift, 286
China
  and Hump Airlift, 58–61
  Orient Project proposed for, 137, 144–45, 151
  transport of 94th Army to Shanghai, 139–42
Chindwin Valley, 46, 47
Chinese in India-China Division, ATC, 124–28
Chinnampo, 243
Chongchon River, 243, 261
Chosin Reservoir, 252, 253, 263
Churchill, Winston, quoted, 130
Cincinnati, 28, 138
Civil Aeronautics Authority, 175, 190
Civil Reserve Air Fleet (CRAF), 285, 302–3, 315
Clark, Lt., 75–77
Clarke, Gen. Bruce C., 307–8, 311
Clay, Gen. Lucius D., 157, 158, 159, 161, 182, 206, 221
Coates, Col. Dudley, 69, 73
Cochran, Jacqueline, 35–37

Collins, Maj. Tom, 225, 228, 229, 239, 240, 241
Combat Cargo Command (CCC), 229–64
Congo Airlift (United Nations), 286, 295–96
Coulter, Col. Jack, 209, 221
Crashes and accidents, 23, 27
  Amazon River, 32–34
  Arctic, 34
  Berlin Airlift, 153, 217, 218
  Combat Cargo Command (Korea), 257
India-China Division, ATC (Hump Airlift), 45, 46–47, 52, 54–55, 63, 68–69, 74, 80–82, 93, 113–14, 134
  Pacific Ocean, 30–32; *see also* Flying Safety Program

Dacca, 95
DaVania, Col. Richard, 140–41
DeAngelis, Lt. John J., 30–32
Dearbein, Maj. James A., 111
DeBona, Lt. Joe C., 32–34
Dergoan Base, 86
Dhahran Air Base, 269
Diebold, Lt. William F., 99
Doolittle, Gen. James H., 60, 175, 195
Douglas, Donald W., 71
Douglas, Lt. Col. James H., Jr., 52–55, 63, 298, 303, 305
Douglas, Maj. Gen. Robert, 219
Duncan, Col. Asa, 17
Dutch Guiana, 33

Eaker, Gen. Ira, 115
Emrick, Sgt. Horace, 76
Erding, 194, 276
Evacuation of wounded; *see* Aeromedical evacuation

Falkenberg, Jinx, 194
Far Eastern Air Forces (FEAF), 229, 250–51, 254
  Combat Cargo Command (Korea), 229–64
Fassberg, 170, 186, 209–10, 221
Fernandez, Lt. Col. Manuel, 163–64, 167, 176, 228, 234, 238, 239, 240
Ferrying Command, Air Corps, 8, 11–12, 19–29
Ferrying Division, Air Transport Command, 28–42, 50–51
Fisher, Paul, quoted, 198–99
Flickenger, Lt. Col. Donald, 84
Flying Safety Program, 41–42
  India-China Division, ATC, 68–69, 102–6, 114–16, 132; *see also* Crashes and accidents
Forman, Brig. Gen. Robert D. (Red), 14, 43, 44–45, 50, 67–68, 143, 152–54, 163, 168, 172, 219, 230, 239, 254, 297
Frankfurt, 176
Fryklund, Richard, quoted, 312
Fuhlsbüttel, 210
Fulda, 152, 172, 173, 213

Gander, Newfoundland, 20, 53
Ganeval, Gen. Jean, 211–13
Ganges River, 137
Gatow Airport, 168, 170, 174, 201, 211
George, Gen. Harold L., 28, 36, 50, 52, 56, 62, 63–64, 85, 88, 112, 114, 115, 125, 130, 145, 148, 149, 155, 326
Gerhart, Gen. John K., 326
German Youth Association, 273–74
Gibson, Catherine, 13, 165–66
Gillies, Mrs. Betty Hyler, 36, 37–38
Gimbel, Bruce, 23–24
Glass, Frederick M., 303
Godfrey, Gen., 103
Goldwater, Barry, 40, 299
Goose Bay, Labrador, 38
Grant, Maj. Gen. David, 23–24
Great Falls, Mont., 197, 218
Greenland, 34
Guilbert, Maj. Edward A., 163, 219, 228, 232, 249, 258

Hagaru-ri, 253, 255, 258
Halvorsen, Lt. Gail S., 207–8
Hamhung, 254, 255
Hamm, Col. Earl, 93, 104–5
Hampton, Col. Edward, 240–41
Hanoi, 142–43
Hardin, Brig. Gen. Thomas O., 50, 52–53, 55, 62–63, 88, 113
Harding, William B., 303
Harned, Maj. Al, 141
Harriss, Maj. Gen. Field, 234
Harvey, Maj. Alva T., 20
Harz Mountains, 168, 172

Hastings, Eddie, 93, 163
Hastings Mill, 87
Hatcher, George, 230
Hawaii, 20
Haynes, Col. Caleb V., 20
Healy, Mr., 140–41
Heard, Lt. Col. Hamilton, 69, 73, 87, 163, 326
Henderson, Dr. Elmer, 244
Henebry, Brig. Gen. John P., 263
Hickam Field, 30
Himalaya Mountains; *see* Hump Airlift
Hoag, Brig. Gen. Earl S., 62
Hogg, Capt. Robert, 165, 230
Hohenberg, John, 291–92
Hooghly River, 137
Hope, Bob, 194–95, 237
Howley, Col. Frank L., 217
Hukawng Valley, 81
Hump (Himalayan) Airlift, 8–9, 43–135
  Japanese air attacks, 75–81
  purpose, 58
  See also India-China Division, ATC
Hungarian refugees, Safe Haven Airlift, 9, 286
Hungnam, 253, 254, 259
Hyde, Group Capt. Noel C., 210

Inchon, 231, 232–33, 234, 260
India-China Division, Air Transport Command
  Army Air Forces Day (1945) record, 131–34
  base flight quotas and competition, 110–12
  Flying Safety Program, 68–69, 102–6, 114–16, 132
  health and medical problems, 55–56, 84–85, 92, 103–4, 107
  jungle indoctrination, 100–1
  key officers under Tunner, 64–70, 93
  morale and personnel problems, 51, 55, 57, 85–92, 103–5, 108
  postwar activities, 138–49
  Production-line Maintenance (PLM), 93–95, 104, 107–8, 132–33
  Search and Rescue Unit, 97–100
  supply problems, 107–8
  tonnage production, 112–16, 128–29, 130
  troop transportation, 124–28
  Wings, 70, 106, 128, 131
Iraq, 20
Irrawaddy River, 47, 49, 59
Itazuke, 239

Jacobs, Sgt. Marvin H., 98–99
Johnson, Louis, 226

Kaczmarczyk, Sgt. Alex, 30–32
Karachi, 53, 60, 98, 147
Kellums, Lt. Col. Homer, 111
Kennedy, John F., 318–19
Kent, George, quoted, 275
Kimpo Airfield, 232, 233, 234, 238, 239, 240, 241
Kodiak, 225
Korean War
  air-supply operations, 9, 228, 232–35, 243–44, 247–48, 252, 255, 258, 259–60, 263–64
  Combat Cargo Command (CCC), 229–64
  military units
    1st: Cavalry Division, 242, 260; Marine Division, 235, 242, 252, 253, 254, 256
    7th: Infantry Division, 235, 236; Marine Regiment, 253, 254
    8th Army, 232, 234, 236, 237, 238, 242, 243, 252, 258, 260, 261
    101st Airborne Division, 230
    187th Airborne Regiment, 230, 232–33, 238, 242, 244, 324
    801st Medical Air Evacuation Squadron, 246, 258
    2348th Quartermaster Airborne Air Supply and Packaging Company, 244
Koto-ri, 258
Kumon Mountains, 47
Kunming, 59, 58, 117, 120, 121, 127
Kurmitola Base, 109
Kuter, Maj. Gen. Laurence S., 156, 159, 160, 162, 190, 197, 198, 226, 227, 229
Kweilen, 117, 120, 121

La Farge, Lt. Col. Oliver, *The Eagle in the Egg*, quoted, 27
Lambert, Capt. A. E., 99
Lashio, 58, 128
Lebanon Airlift, 9, 281–82, 285

LeMay, Maj. Gen. Curtis, 20, 158, 160, 161–62, 166, 182, 186, 187, 189–90, 307, 316, 326
Lemnitzer, Gen. Lyman L., 307, 311, 316
Lend-Lease Act (1941), 18
Lhasa, 81
Liuchow, 117, 120, 138–42 *passim*
Long Beach, Calif., 22, 32, 70
Love, Mrs. Nancy Harkness, 35–39 *passim*
Love, Maj. Robert M., 34, 35
Lübeck, 210
Luce, Clare Boothe, 272
Lucius, Lt., 75–77
Luliang River, 84–85
Lykins, Lt. Paul O., 154

MacArthur, Gen. Douglas, 24, 92, 138, 229, 231, 232, 239, 241, 242
McDill Field, 24, 25
McMahon, Lt. Col. Orval O., 163, 167, 228, 232, 248–49
McNamara, Robert S., 319, 325–26
McNarney, Gen. Joseph, 226
Magic Carpet Airlift, 286
Malkin, Richard, quoted, 181
Mandalay, 47, 128
Martin, Sgt. Tony, 108
MATS; *see* Military Air Transport Service
Mekong River, 48
Memphis, Tenn., Air Corps Detachment, 13–14, 15–16
Merer, Air Commodore J. W. F., 188
Miami, 32, 62, 110
Military Air Transport Service (MATS), 9–10, 156, 159, 190
  Congressional hearings on modernization, 300–7, 314–15
  development and function, 283–87
  opposition to, civilian, 287–88, 290–300
  under Tunner: as Deputy Commander, 159–62, 226–29; as Commander, 281–317
Milton, Col. Theodore Ross, 164
Misamari Base, 97, 111
Mishmi Hills, 45
Mohanbari Base, 98
Monroney, Sen. S. Mike, 315
Moscow, 20
Mosely, Maj. Thomas L., 25
Mourey, Richard L., 315
Myitkyina, 47, 54, 59, 75, 103, 128

Naga Hills, 45–46, 48, 59, 76, 83
Natal, 33
National Association of Women Pilots, 39
Neumann, Franz, 217
Nixon, Richard M., 319
Norden, Capt. Arthur, 68–69
Norstad, Gen. Lauris, 227, 247, 266
North Atlantic Treaty Organization (NATO), 266–68

Oberpfaffenhofen, 169, 192
O'Daniel, Gen. Mike, 242
Olds, Col. Robert, 19–29 *passim*
Operation Big Slam/Puerto Pine, 307–14
Operation Deep Freeze, 286
Operation Hope, 143–44
Operation Little Vittles, 207–8
Operation Vittles; *see* Berlin Airlift
Oran, 32, 33
Orient Project, 137–38, 144–48, 149–51

Pardue, Right Rev. Austin, quoted, 278–79
Partridge, Lt. Gen. Earle E., 231, 239
Patkai Range, 46
Patterson, W. A., 298
Pennario, Leonardo, 108
Philippines, 24, 25
Phillips, Brig. Gen. Thomas R., 299
Pilots, 265
  Air Force, recruiting, 16, 21, 23
  Berlin Airlift, 170, 172, 175–77
  Ferrying Command, 24–25, 27–28
  Ferrying Division (ATC), 28–30, 37, 40–41
  Hump Airlift, 51, 61, 63, 66–67, 101–2
  rotation system, 89–90
  training, 16, 21, 27, 28, 40–41, 102–3, 284
  women, 35–39
Plane delivery, World War II
  Atlantic Ferrying Organization, 18
  domestic, 17–18
  Ferrying Command, 11–12, 19–28
  Ferrying Division, ATC, 28–42
Plane models
  B-17, 19, 24, 27, 30, 38

Plane models (*cont.*)
B-24, 20, 32, 34, 110
B-25, 92, 98
B-26, 23
B-70, 329–30
C-46 (Curtiss Commando), 45, 62, 70, 81, 98, 110, 119, 121, 123, 126, 128, 230
C-47 (Douglas), 29, 54, 60, 62, 70, 79, 98, 99, 110, 119, 121, 123, 126, 158, 167, 170, 181, 197, 198, 199, 230, 238, 254, 255
C-54 (Douglas Skymaster), 40, 54, 71, 93, 94, 110, 121, 127, 128, 133, 142, 145, 152, 153, 155, 158, 159, 165, 167, 173, 181, 186, 187, 197, 198, 199, 207, 213, 216, 230, 233, 236, 237, 247, 248, 262
C-74 (Douglas), 197–98, 199, 200, 206
C-82, 206
C-87, 47, 110
C-97 (Boeing Stratocruiser), 202–3, 206
C-109, 71, 110
C-119 (Fairchild Flying Boxcar), 206, 230, 234, 236, 238, 241, 247, 254, 255, 256
C-124 (Globemaster), 200, 224, 281, 282, 289, 300–1, 321
C-141 (Lockheed), 320
L-5, 98, 99
P-38, 32, 33
P-39, 37–38
P-40, 77
P-47, 39
Porter, Capt. John E., 79–80
Power, Gen. Thomas S., 326
Prague, 213
Presque Isle, 38
Prestwick, Scotland, 20
Prevost, Maj. Jules, 94, 95, 164, 169, 192
Price, Rep. Melvin, 299
Pricer, Maj. Donald C., 98
Prindle, Col. Hoyt, 253
Puerto Rico, 32; Operation Big Slam/ Puerto Pine, 307–14
Puller, Lt. Gen. "Chesty," 326
Pusan, 229, 231, 236, 237, 245
Pyongyang, 235, 237, 238, 241, 242, 243, 259, 260

Quemoy and Matsu Islands (Formosa Strait) Airlift, 9–10, 282, 285, 288

Rafts, rubber survival, 31–32
Rangoon, 58, 75
Reed, Gordon W., 303, 304
Reeves, Maj. Gen. Raymond J., 301, 304
Reichers, Lt. Louis T., 20, 24–25
Reuter, Ernst, 157, 217
Reynolds, Sgt. James W., 30–32
Rhine-Main, 170, 172, 173, 191, 196, 201, 214
Rickenbacker, Col. Eddie, 30–32
Ridgway, Gen. Matthew B., 287
Rivers, John, 299
Rivers, Rep. L. Mendel, 299, 305, 314, 317, 322
Rockwell Field, 3, 14
Roosevelt, Franklin D., 18–19, 35, 58, 62, 130
Routes, 12
to Africa, 32–33
around the world, 20
Crescent (to India via Azores), 39, 40, 53, 71
domestic, 40
Fireball Express (to India via South Atlantic), 39, 40, 53, 62, 88
Great Circle, 226
Great Falls, Mont., to Fairbanks, Alaska, 39
MATS, 283
North Atlantic, 20, 38, 39
Snowball (to United Kingdom), 40
South Atlantic, 20, 39
Royall, Kenneth, 194
Rust, Gordon M., 69, 98, 110, 142, 163, 326

Sacramento Air Depot, 3, 5, 7, 24
Sadiya, 59
Saliba, Jacob C., 304
Salween River, 47
Santsung Mountains ("the Rockpile"), 47, 48
Saunders, Air Marshal Sir Arthur P. M., 186, 187
Schleswigland, 210
Schuffert, Sgt. John, 180
Scott Field, 281, 282, 298, 299
Seagraves, Dr. Gordon, 54

Seagraves, James F., 299–300
Search and rescue operations, 33–34
India-China Division, 79, 84, 97–100
Seoul, 231, 232, 233, 236, 243, 260, 262
Shanghai, 138, 139–43 *passim*
Sharp, Dudley C., 303, 305
Sharp, Evelyn, 36, 37–38
Shouse, Mrs. Jouett, 273
Sian, 117, 120, 127
Sims, Capt. Harold, 165, 230
Sinanju, 243, 258
Singapore, 144
Sinmak, 237
Smith, Lt. Col. Allen D., 246
Smith, Maj. Gen. Cyrus R., 38, 50, 56, 61, 63, 64, 91, 112, 298, 326
Smith, Brig. Gen. Joseph, 159, 160, 162
Smith, Maj. Gen. Oliver P., 256, 258
Smith, Gen. Walter Bedell, 216
Sookerating Base, 77, 95, 109
Spaatz, Gen. Carl, 246
Spain, Lt. James, 80
Stalingrad Airlift, 183–84
Stiles, Kenneth, 67–69, 120, 163
Stilwell, Gen. Joseph W., 46, 54, 81
Strategic Air Command (SAC), 284, 294, 321
Stratemeyer, Lt. Gen. George E., 21, 93, 114, 115, 120, 137, 145, 228–29, 230, 236, 239, 240, 241, 248, 251, 263
Struble, Vice Admiral Arthur, 233
Suez Canal crisis, 288
Sukchon, 238, 240, 241, 244
Sunchon, 238, 240, 241, 244
Swallwell, Lt. Col. Kenneth E., 163, 170, 176, 209, 210, 211
Sykes, Thomas, 74
Symington, Stuart, 194, 195–96, 197, 200, 201

Tactical Air Command, 322
Taegu, 237, 241, 245, 259
Takoradi, Gold Coast, 20
Talbott, Harold E., 279
Tali Mountain, 48
Task Force Times, 180
Taylor, Gen. Maxwell D., 316
Teague, Ike, 95, 163
Tegel Airport, 211–12
Tempelhof Airport, 152, 154, 168, 169–70, 172, 173, 174, 210–11, 217, 220, 273
Tezgaon Base, 94–95
Thompson, Lt. William G., 164–65, 180
Thurmond, Sen. J. Strom, 299
Tok-chok-do Island, 240
Tongjoson Bay, 237
Towers, Maj. Roderick, 24–25
Towne, Capt. Raymond, 164–65, 225, 228, 239, 249, 278, 311
Travelers Insurance Company, 41–42
Tribes
Burma: Kachins, Lisus, Shans, 83
China: Lolos, 83
India: Abors, Mishmis, Nagas, 82–83, Dufla, 98–99
Tripoli, 53
Trippe, Juan, 149
Troop transportation
Chinese to Shanghai (Cannon Project), 139–42, 143
India-China Division, ATC, 124–28
Korea (Combat Cargo Command), 234, 236–41, 253–59 *passim*
MATS, 284
Operation Hope (U.S. soldiers from China to India), 143–44
"Swarmer" maneuver, 227
Truman, Harry, 159
Tunner, George, 41
Tunner, Mrs. Sarah, 148, 149
Tunner, William H.
Air Corps service: Rockwell Field, 3, 6, 14; Memphis Air Corps Detachment, 13–14, 15–16; Randolph Field, 14; Panama Canal Zone, 14–15; Fort Benning and Maxwell Field, 15; Military Personnel Division, Washington, 17–18
Air Force Deputy Chief of Staff, 280, 281, 283
Berlin Airlift, 152–55, 162–224; Combined Airlift Task Force Commander, 186–89; honors, 223
education, 5; West Point, 6–7
Ferrying Command (World War II), 11–12, 19–28
Ferrying Division, Air Transport Command, 28–42, 50–51
India-China Division, Air Transport Command (Hump Airlift), 43–135 *passim;* relations with Gen. Chennault (14th Air Force),

Tunner, William H. (*cont.*)
116–24; postwar activities, 138–49
Korea (Far East Force Combat Cargo Command), 229–64
military career, summary, 8–10
Military Air Transport Service: Deputy Commander, 156, 159–62, 226–29; Commander, 281–317
Orient Project, 137–38, 144–48, 149–51
observations and recommendations *re* future military airlift, 320–32
United States Air Forces in Europe, commander, 265–80
Twining, Gen. Nathan F., 227, 316

United States Air Forces in Europe (USAFE), 265–80, 329
command function in Berlin Airlift, 183, 189–97 *passim*
community relations program under Tunner, 268–71, 280
morale problems under Tunner, 277–79
United States Chamber of Commerce, 291, 299, 300
United States Military Academy, West Point, 6, 326–27
United States Navy, participation in Berlin Airlift, 214–15
United States Strike Command (STRICOM), 284, 290, 309, 327–28

Vandenberg, Gen. Hoyt, 161, 162–63, 166, 226, 229, 251
Vincent, Casey, 121
Vinson, Rep. Carl, 305
von Rohden, Maj. Gen. Hans D., 183–84
Vosseller, Commander James O., 215

WAFS; *see* Women's Auxiliary Ferrying Squadron
Walker, Lt. Gen. Walton H., 242, 259
Walters, Capt. Bill, 42
WASP's; *see* Women Auxiliary Service Pilots
Wavell, Gen. Sir Archibald, 78
Weather
Berlin Airlift, 172, 194, 209
Hump, 44, 73–75, 87, 103, 113
India, 106
Korean airlifts, 239–40
Wedemeyer, Lt. Gen. Albert C., 114, 120, 121, 134, 137, 138, 145, 149, 161, 162
Westover Field, 165
Wheeler, Capt. Dan, 43, 44, 45, 50, 86, 97
Wheeler, Gen. R. A., 145, 149
White, Lt. Col. Robert Bruce, 65–66, 73, 93–94, 132, 164
White, Theodore, quoted, 56
White, Gen. Thomas, 289, 305–6
Whittaker, Lt. James C., 30–32
Wiesbaden, 157, 159, 166, 170, 172, 173, 176, 186, 191, 201, 209, 219, 266
Willauer, Whiting, 150–51
Williams, Air Marshal, 188, 209
Witt, Pvt. Paul, 76
Wolmi-do, 232
Women Auxiliary Service Pilots (WASP's), 37–39
Women's Auxiliary Ferrying Squadron (WAFS), 36–37
Wonsan, 235, 236, 237
World Air Freight, Inc., 155–56
World War II
Ferrying Command, 11–12, 19–28
Ferrying Division, ATC, 28–42
India-China Division, ATC, 43–135
Wounded and sick, evacuation of; *see* Aeromedical evacuation
Wunstorf, 210

Yalu River, 242, 261
Yonpo Airfield, 255, 256, 258, 259, 260

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