

HERMAN S. WOLK



## The Cover

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# **FOREWORD**

Almost twenty-five years after publishing *Planning and Organizing the Postwar Air Force, 1943–1947*, and a decade after publishing his definitive work, *The Struggle for Air Force Independence, 1943–1947*, Herman S. Wolk, retired Air Force senior historian, returns to the subject that capped his nearly fifty-year career with the Air Force history program. As Wolk explains, this brief work is a reflective analysis.

The United States Army's air arm waged a frustrating and uncertain battle during the interwar years to gain greater autonomy from the War Department. For the air arm, the key transition was the establishment in 1935 of the General Headquarters (GHQ) Air Force under Brig. Gen. Frank M. Andrews. The GHQ Air Force was the first American air force that consolidated all striking forces.

For several years before the Japanese attack on Pearl Harbor, which triggered U.S. entry into World War II, President Franklin D. Roosevelt foresaw the major role that air power would play in the conflict, and he called for a massive buildup. The president wanted the major share of aircraft produced to go to the Allies. Consequently, he was sometimes at cross purposes with his Air Corps chief, Maj. Gen. Henry H. "Hap" Arnold, who was hard at work trying to increase the Army's air capability.

The formation in June 1944 of the Twentieth Air Force was a landmark event in the Army air arm's drive for independence. With B–29s to send against the Japanese home islands, the Twentieth gave the Army Air Forces (AAF) what Arnold termed "a Global Air Force." Its formation set the precedent for that of the postwar Strategic Air Command, which provided the United States with its nuclear deterrence force in the Cold War.

The lessons of World War II were many. Many also were the significant contributions of the AAF—tactical, strategic, support, humanitarian—that convinced President Harry S. Truman, Congress, and the American people that the creation of the United States Air Force (USAF) was necessary in the postwar era.

Wolk makes the pivotal connections between politics and the searing experience of war to explain how and why the USAF was established. His analysis addresses not only technology, bureaucracy, and politics, but also people. The service's founding airmen were more than flyers and technologists; they were, above all, men of faith who believed in what they were doing. For many years they fought against long odds. The nation owes them a great debt.

C. R. ANDEREGG
Director, Air Force History and Museums
Policies and Programs

# **ACKNOWLEDGMENTS**

After decades of writing and lecturing about the struggle for air independence, I owe many debts. My colleagues among Air Force historians have been of great help over the years. The late Thomas Sturm, long a distinguished historian in the Office of Air Force History, first kindled my interest in the postwar Air Force.

A special thank you is due Jack Neufeld, former director of the Air Force Historical Studies Office, for his long-time support and guidance and for giving me the time to launch this book in an environment free of background noise.

Thanks also go to C. R. "Dick" Anderegg, Director, Air Force History and Museums Policies and Programs, for his enthusiastic interest in this project, and upon my retirement from the government, his timely admonition to "finish the book!"

My heartfelt appreciation goes to the historians of the Office of Air Force History: the late Col. John F. Shiner, Diane Putney, George Watson, Roger Miller, Dan Mortensen, George Cully, and Phil Myers, all of whom cheerfully did the hard work of putting together the superlative Air Power History course. Richard H. Kohn, former chief of the Office of Air Force History, and Colonel Shiner deserve special praise as the course's founders. Colonel Shiner, colleague and gentleman, will always be remembered as an exemplary scholar and leader. The Air Power History course, which convenes annually from March to May at the Pentagon for junior officers, and intensively for two weeks in the early autumn at Bolling Air Force Base for Air Force field historians, is the only one of its kind in the country.

I will be forever grateful to the late Robert Frank Futrell, for many years the dean of Air Force historians. His contributions span the entire Air Force history program, from Craven and Cate's *The Army Air Forces in World War II*, to his *The United States Air Force in Korea*, and ultimately, to his definitive *Ideas*, *Concepts, Doctrine: A History of Basic Thinking in the United States Air Force*, 1907–1964. All air historians have benefited from his work. Moreover, Frank set the highest standards for those who would chronicle Air Force history, a subject he was always eager to discuss. He has been sorely missed by all of us.

Warren A. Trest, formerly senior historian in the Office of Air Force History and in the Air Force Historical Research Agency at Maxwell Air Force Base, Alabama, was a constant source of encouragement and an expert on the history of Air Force roles and missions.

I was extremely fortunate in the 1970s to interview Gens. Ira Eaker, Curtis LeMay, and Haywood "Possum" Hansell. In lengthy correspondence, Generals

Eaker and Hansell generously provided me with priceless recollections of their wartime and postwar experiences. Both were great gentlemen, whose insights and good humor made a lasting impression. Their service goes back well before World War II, and for their devotion in peace and in war, the nation owes them much gratitude. This also holds true for an entire generation of air leaders, born before the turn of the twentieth century, many of them now forgotten, who are the true founders of the United States Air Force.

W. Stuart Symington, assistant secretary of war for air in 1945, 1946, and 1947, and then the first secretary of the Air Force, took time from his senatorial duties, and subsequently from his law practice, to discuss his large role in the postwar struggle for air independence.

I am extremely thankful to the late Gen. Jacob E. Smart, wartime hero and air planner, who, in his nineties, still had one of the keenest minds in the Air Force. A devotee of history, General Smart participated in many of our seminars over the years, and was always gracious and perceptive.

Maj. Gen. John W. Huston, a former chief of the Office of Air Force History, has been a frequent telephone correspondent, and as a biographer of General Arnold, and editor of Arnold's diaries, he has been most helpful in sorting out Arnold's prewar and wartime issues and controversies.

Richard P. Hallion, also a former chief of the Air Force History Office, helped to bring out important historical connections during our many chats over the years.

Many thanks go to Richard Wolf, historian and production chief in the Office of Air Force History. His expertise in all areas of editing and production made such a significant contribution to this book.

I have for a long time admired Mary Lee Jefferson's fine work as a writer and editor in the Office of Air Force History. I owe her a great debt for her wonderful, timely efforts in making my manuscript into a book.

My deepest gratitude goes to my wife, Sandy, who served as my production guru. She not only cast a sharp eye on the manuscript, she also contributed all manner of things over the long haul. During the entire research and writing process she provided the loving devotion and support that made this book possible. Our children, Jill Lori Kephart and Traci Ann Sheffer, provided constant love and understanding, as did our grandchildren, Julie Adam, Michael Adam, Kelsea Kephart, and Dalton Kephart, who seemed to know that Grandpa was up to something in his third floor office. I owe much love and thanks for the quiet time; and, finally, I owe special thanks to Coach Kreg Kephart, our son-in-law, for so much help given in so many ways over a long period of time.

# THE AUTHOR

Herman S. Wolk was, until his recent retirement, a senior historian with the United States Air Force. After earning B.A. and M.A. degrees from the American International College in Springfield, Massachusetts, he studied at the Far Eastern and Russian Institute at the University of Washington from 1957 to 1959. He served as a historian at Headquarters, Strategic Air Command, from 1959 to 1966 and in the Office of Air Force History, from 1966 to 2005. In 1973 and 1974 he was a member of the Office of the Secretary of Defense Special Project on the History of the Strategic Arms Competition, and he is a Fellow of the Inter-University Seminar on Armed Forces and Society.

Mr. Wolk is the author of Strategic Bombing: The American Experience (1981); Planning and Organizing the Postwar Air Force, 1943–1947 (1997); and Fulcrum of Power: Essays on the United States Air Force and National Security (2003). He is a contributing author to We Shall Return! MacArthur's Commanders and the Defeat of Japan (1988); The Pacific War Revisited (1997); and Winged Shield, Winged Sword: A History of the United States Air Force (1997). He has published many articles and essays and is now working on Cataclysm: General Hap Arnold and the Defeat of Japan, to be published by the University of North Texas Press.

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The question of effective, efficient, and economical organization comes before the country after every war, as each succeeding generation seeks—hitherto unsuccessfully—to profit to the full from the lessons learned in war. Today that question is with us again and this time more urgently than ever before.

—General of the Army Henry H. Arnold to the Senate Military Affairs Committee, October 1945, on Unification of the War and Navy Departments

You, Gentlemen of the Committee, are concerned with organization. What are you making an organization for? There is only one answer: To avoid war if possible and if this is not possible to win the next war promptly and with a minimum loss of American lives. This is the whole purpose and function of the organization you are about to create.

—Lt. Gen. James H. Doolittle to the Senate Military Affairs Committee, November 1945, on Unification of the Armed Forces

I did not have the opportunity of knowing Kent Roberts Greenfield, who in the late 1940s and 1950s was the chief historian of the Department of the Army. However, I have roughly modeled the format for this work after his *American Strategy in World War II*, which carried the subtitle, *A Reconsideration*, and which debuted as a series of lectures. Like Greenfield's book on World War II, this work owes a great deal to lectures, in my case, to the History of Air Power course at the Pentagon, where it was always a pleasure to discuss Air Force history with junior officers, the service's future leaders.

What, one might ask, is "a reconsideration?" To some, it might imply an attempt to overturn a thesis. Such is not the case here. I published *Planning and Organizing the Postwar Air Force, 1943–1947*, and *The Struggle for Air Force Independence, 1943–1947*, a number of years ago. Since then, I have thought a great deal about how and why the United States Air Force became a separate military service, and I have recognized the influence of various patterns and people. This, in a way, is my own personal definition of a reconsideration. Perhaps it falls more nearly between a distillation and reflections.

Looking back over decades, I realize that there are people and events that I failed sufficiently to emphasize in previous books. The War Department was for years, and for its own reasons, hostile to expanding the Army Air Corps. The Congress was more forthcoming, bringing up many bills during the interwar years to make the air arm independent. A frustrating and uncertain fight for air autonomy unfolded on two simultaneous tracks, with only sporadic progress. For the Army air arm, the key transitional organization between the post-World War I period and the immediate pre-World War II buildup was the GHQ (General Headquarters) Air Force headed by Maj. Gen. Frank M. Andrews, a major air figure who deserve to be more remembered. He shaped the first American air force that embodied all air striking forces. An advocate of bomber forces, Andrews was a sterling leader who, before his death in the crash of a B-24 near Kaldarnes, Iceland, in 1943, had held, successively, three theater commands. He enjoyed the great respect of Gen. George C. Marshall, Army chief of staff, who made him commander of all U.S. forces in the European theater. Andrews's rise to European commander, only months before his death, has ever since fueled speculation that Marshall ultimately had in mind to put him in command of the OVERLORD invasion force. Andrews's career and potential will, of course, always be topics of fascination and conjecture. Marshall himself described Andrews as one of the Army's "few great captains," who, had he lived, would have been charged with great responsibilities.

In the late 1930s President Franklin D. Roosevelt, highly impressed by the potency of the Luftwaffe in dispatching Poland and the low countries, foresaw the major role that air power would play in future conflicts. A former assistant secretary of the Navy, he became a foremost advocate of the air arm, before U.S. entry into the war, proposing a huge increase in aircraft production, especially bombers, and, during the war, calling on Gen. Henry H. "Hap" Arnold and the Army Air Forces (AAF) to strike heavily against the Axis powers. Roosevelt's had been the major voice calling for U.S. aid to Britain and the Allies, but he crossed swords with Arnold, who was fighting to build up U.S air power and who opposed sending great numbers of aircraft to Britain. In Roosevelt's view, it was in America's interest to keep Britain in the war against Nazi Germany.

In June 1944 the establishment of the Twentieth Air Force, commanded by Arnold in Washington as executive agent of the Joint Chiefs of Staff, with the mission of striking the Japanese home islands, was a landmark event in Air Force history, and had significant portent for the post—World War II period. Also, the views of AAF leaders with respect to the dropping of atomic bombs on Japan deserve far more emphasis. This is an important and complex subject that touches upon politics, technology, and roles and missions. It has always struck me as rather curious that in the avalanche of writing and commentary on the end of the war in the Pacific, much of it published recently in connection with the abortive script for the *Enola Gay* exhibit at the National Air and Space Museum, relatively little attention has focused on the opinions of the air leaders whose respon-

sibility it was to drop the atomic bombs. Arnold and his operational commanders were not opposed to doing so, but they believed that continued B-29 conventional attacks would force the Japanese to surrender. Controversy will forever accompany the subjects of strategic bombing in general and the atomic bombing of Hiroshima and Nagasaki specifically. Recent scholarship has again raised the issues.<sup>2</sup> In World War II, with the very survival of the Allied cause at stake, the question of morality was never uppermost in the minds of politicians and commanders. Frequently the missing ingredient in the discussion is that of context the military and political situation that faced world leaders precisely when they made their key decisions. Although scholars have alleged that racism made the firebombing of Japan's cities easier, the overriding rationale was winning the war at the lowest cost in American lives. Racism was not absent in relation to the Japanese, but it had nothing to do with the devising of basic strategies for defeating them as quickly as possible. It is easier to look back more than a half-century and reflect upon whether decisions were correct or not. It is much more difficult, if not impossible for some, to recreate the precise context of 1945 and the history that informed the decisions of that fateful year.<sup>3</sup>

The close relationship between Generals Arnold and Marshall was important to the success of the buildup of the air arm immediately before U.S. entry into World War II. Marshall, as well as President Roosevelt, grasped the coming importance of air power in national defense. Aware of the difficulty of getting air requirements through the War Department General Staff, in early 1942 Marshall initiated a major overhaul, the most far-reaching since the turn of the century, of that organization. Moreover, during the war he remained sensitive to Arnold's needs, giving his air chief as much power and flexibility as possible. Marshall acknowledged the AAF's extraordinary role in the Allies' triumph, noting that it paved the way for the success of D-Day by defeating the Luftwaffe in the months leading up to the invasion of the European continent. "This air preparation," he emphasized, "was a decisive factor in the success of OVERLORD." Marshall paid tribute to the AAF by noting its remarkable development from a small, obsolete prewar force to the mighty armada that during the conflict "in personnel, planes, technique, and leadership . . . made an immense contribution to our victories." It is difficult now to appreciate the absolutely essential role played by the AAF in World War II. The buildup of the air forces, from the smallest combat branch in the Army to the largest during the war, was unprecedented in American military history.

Arnold's determination to drive Japan out of the war without the necessity of an invasion, thereby assuring the creation of a postwar independent air force, fueled his intense oversight of the operations of the Twentieth Air Force. He had cut all corners in developing the B–29 bomber, had staked all resources on a very long range force, and, in the summer of 1945, found himself and the Army Air Forces in a race against time as President Harry S. Truman approved planning for a November invasion of Kyushu. Earlier in 1945, Arnold's well-known impa-

tience surfaced, and he relieved Haywood S. "Possum" Hansell, his B-29 commander, in favor of Curtis E. LeMay, in what was surely one of the most fateful changes in leadership of World War II. In March, LeMay sent his B-29s over Tokyo with incendiaries, on low-level missions at night, making one of the most crucial changes in air tactics and one of the most important military decisions of World War II. I have emphasized the Twentieth Air Force, in effect a specified command that reported directly to the Joint Chiefs of Staff, because of the impact of its operations in 1945 on the end of the conflict in the Pacific. The way in which the war ended, with the dropping of the atomic bombs on Japan, ushered in the nuclear age, fueled the postwar debate over national security, and, moreover, for the purposes of this book, set down a marker connecting the Army air arm in all of its power to a central role in postwar strategic planning and the drive for an independent United States Air Force. This emphasis is not meant in any way to denigrate the tremendous importance of air operations during the war in other theaters. Air operations—tactical, strategic, and support—made a global impact in North Africa, Western Europe, and the South and Southwest Pacific. However, the magnificent performance of the global air forces is beyond the scope of this book.

Also more deserving of attention are the contributions of Gens. Dwight D. Eisenhower and Lauris Norstad to the drive for air independence. Eisenhower, whose support was intense, deserves the accolade, "a founder of the United States Air Force." Norstad, a figure now generally forgotten, played a major role in organizing the postwar air force and, together with Adm. Forrest Sherman, crafted draft legislation for the National Security Act of 1947.

Also, over the years I have come to appreciate to a greater degree the depth and even sophistication of General Arnold's thoughts on air organization. Arnold's idiosyncrasies as a manager are well known; his style was viewed as undisciplined and shoot-from-the-hip. Critics, consequently, have found him an easy target. However, he knew how to build an air force and possessed a clear vision of what a United States Air Force might look like a half-century into the future. "Any air force," Arnold warned, "which does not keep its doctrines ahead of its equipment, and its vision far into the future, can only delude the nation into a false sense of security." Arnold's thinking could sometimes be startling. Before the end of World War II, he foresaw the era of unmanned vehicles. Air power as it was prosecuted during the war, he prophesied, "could become obsolete." Often criticized as inflexible, he was anything but stodgy in his thinking.

To Arnold, the war proved that "the traditional distinction between citizen and soldier was no longer valid." It also showed what the American people could accomplish when challenged. Under Roosevelt's and Arnold's prodding, industry did the impossible. Factories that had manufactured appliances and automobiles turned out airplanes in staggering numbers. As a result, the Army Air Forces expanded at an unprecedented rate. "The dangers of modern war," Arnold stressed, "extend to the innermost parts of a nation."

It should also be noted that Arnold possessed a fine-tuned awareness of the democratic process. This manifested itself as he constantly reminded his overseas commanders to forward to him in Washington accurate reports of the AAF's accomplishments. The people at home, he fervently believed, should understand "how we make war." They provided for the fighting forces, and they deserved an accurate accounting of the war on all fronts. With the end of the war and the ensuing fight for an independent air force, Arnold made it clear that the American people would decide the shape and character of that force: "Air power will always be the business of every American citizen."

A close reading of how the AAF managed to become the huge and formidable machine that it was reveals the major role of a War Department official who is little known today—Robert A. Lovett. As assistant secretary of war for air, he was Arnold's right-hand man with access to President Roosevelt, Secretary of War Henry L. Stimson, and General Marshall. Lovett, Arnold admitted, knew how to handle him, to take his vision for an air force and make it a reality. Lovett's vital contributions to the wartime AAF cannot be overemphasized. He subsequently was appointed secretary of defense during the Korean War.

With the passage of six decades since the establishment of the United States Air Force, some might have difficulty today imagining the questions and controversies that boiled up after World War II regarding the service's independence. However, the issue of a separate air arm was only part of a larger national debate. At the end of the war, there was clear recognition at the top levels of government that the wartime defense organization had lacked coherence, while there was general agreement that the United States should massively reorganize its national security apparatus to bring it in line with the demands of the modern era. National debate centered on the unprecedented idea of a standing peacetime military establishment whose primary objective was the deterrence of war.

The massive failure of American intelligence and command and control communications at Pearl Harbor had made a deep impression on President Harry S. Truman. He was convinced that a lack of communication within the chain of command was largely responsible for that failure. After the war, his idea was to integrate military and foreign policies and structure new governmental organizations. Truman did not want separate defense and foreign policies. He wanted a national security policy. The question was how to create one for the postwar era.

This is a book about organization, and you cannot have organization without people. It was people—in this case government officials, the military, and specifically airmen—who shaped the design of America's postwar air force. My objective here is to construct a sharper and deeper, albeit briefer, picture of the ideas and events that shaped the birth of the United States Air Force.

# **BETWEEN THE WARS**

The question of how to organize air forces is as old as the air weapon itself. It has remained a constant theme in national affairs, not only after September 1947, when the United States Air Force was established by the National Security Act of 1947, but even up to the present day. At the heart of air organization are issues relating to the control and employment of air power. These issues do not relate solely to technology and command; they are also bound up in politics and service roles and missions. The advance of twentieth century aviation technology forced dramatic changes in war fighting. Thus, the question of how to organize air forces to implement national objectives took on great urgency. Before the enactment of the National Security Act of 1947, Congress had intermittently considered legislation to establish a separate air arm for over thirty years. In 1917, as military aircraft during World War I were evolving, Congress introduced a bill to create a Department of Aeronautics, and during the interwar period, it introduced over fifty measures as its numerous committees convened to consider the issue of air independence.

The airplane played a relatively minor role in World War I. But the grinding attrition of the conflict combined with the promise of what the airplane might do, if given a chance, to lessen the carnage in the trenches lent urgency to the claims of enthusiastic airmen. As a result, in the United States after the war a bitter dispute over the merits and place of military aviation began. Brig. Gen. Billy Mitchell, a dynamic airman, led the crusade for a separate air mission and an independent air service. He was an air power prophet, but, like most prophets, he failed to persuade his contemporaries. The airplane had not demonstrated a clear role in combat and, besides, it could not span the oceans that had long protected the nation. Although during the interwar period numerous boards inched toward accepting the airmen's views, they nonetheless saw the airplane's role as a limited one, confined primarily to the support of ground forces. It took World War II to reveal unequivocally the destructive power of modern aircraft and to provide the testing ground for the air theories that had evolved since World War I but, because of the lack of technology and opportunity, had never been applied.

In World War I the air forces had demonstrated the basic air missions of observation, support of ground troops, and strategic bombing. Yet the War Department and Army airmen had drawn different lessons from the use of those forces. To the Army chief of staff, Gen. Peyton C. March, the war was won on the ground, not by "some new, terrible development of modern science." Airmen of the interwar United States Army chafed within an organization by which they felt shortchanged. Arguing that they knew best how to organize and operate air

forces, they fought for their own promotion list, a separate budget, and the opportunity to state their requirements directly to national authorities without going through the filter of the War Department General Staff.

During the 1920s a number of boards considered the organization of military aviation. Maj. Gen. Mason M. Patrick, chief of the Air Service, favored air autonomy within the War Department, opposing the permanent assignment of air units to the ground army. The Lassiter Board Report of 1923, which recommended a General Headquarters (GHQ) Air Force, marked the Army's first acknowledgment of the independent air mission. However, the Morrow Board Report of 1925 opposed the creation of a Department of Aeronautics, noting that the usefulness of independent air power had yet to be proved. It further specified that air operations should be under the command of Army or Navy officers. The board stated that

no airplane capable of making a transoceanic flight to our country with a useful military load and of returning to safety is now in existence . . . with the advance of the art . . . it does not appear that there is any ground for anticipation of such development to a point which would constitute a direct menace to the United States in any future which scientific thought can now foresee . . . the fear of such an attack is without reason.<sup>1</sup>

The Lampert Committee in December 1925 recommended that a Department of National Defense be established under a civilian secretary. Implied was the concept of three coequal services, but neither the War Department nor the Congress took action. Subsequently, with the advent of the Great Depression, military budgets were held to a minimum. Americans saw no need for increased military strength; the Navy remained the first line of defense.

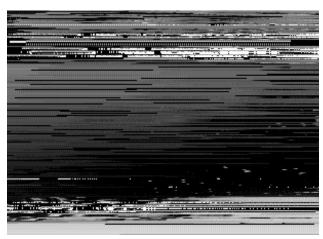
Despite the Air Corps Act of 1926, the War Department continued to believe that the Air Corps' primary responsibility was to support the ground forces. However, the act did provide for air representation on the General Staff,



Maj. Gen. Mason M. Patrick, Army air chief during the 1920s, and Brig. Gen. William "Billy" Mitchell, air power zealot and advocate of an independent air arm.

although the airmen remained subject to War Department control. The act also created the Office of the Assistant Secretary of War for Air—first occupied by F. Trubee Davison, a flyer who suffered severe injuries before his 1918 graduation from Yale—but the office was soon abolished in 1933 by President Franklin D. Roosevelt. Gen. Ira C. Eaker later described the Army's airmen of the interwar years as "just sort of voices in the wilderness; a great many military people considered us crackpots." Meanwhile, Billy Mitchell's call for the formation of a Department of Aeronautics and his subsequent court-martial made headlines, but obscured much of his thinking. Mitchell was ahead of his time, a conceptual air strategist, and unusually competent in planning for the organization and control of air forces, as well as air base defense, abilities often overlooked in the prolific writing about him. His vindication awaited the development and production of aircraft not yet on the drawing board. Possessed of a crusader's energy, he had been driven by issues that ultimately aroused discord. Not given to compromise, he became isolated. After Roosevelt assumed the presidency, Mitchell hoped to influence a change in air policy, but he could not turn the tide. He died in February 1936, a proud patriot to the end.<sup>3</sup>

The period between the wars was distinguished by advancing aviation technology and many attempts by congressional advocates to legislate autonomy for the Army's air arm. However, as noted, the airmen had no opportunity to demonstrate their theories in combat. Despite a series of legislative setbacks in the 1920s and 1930s, when congressional boards ruled that because ground support remained the air arm's major function, they saw no reason to support independence, the *Baker Board Report* of 1934—although opposed to a separate air arm—led in March 1935 to the formation of the GHQ Air Force, commanded by Brig. Gen. Frank M. Andrews.



Maj. Gen. Frank M. Andrews, whose General Headquarters (GHQ) Air Force was a first step toward air arm autonomy.

While the Air Corps Tactical School debated air theory, the Kellogg-Briand Pact outlawing war was signed in August 1928; but, in September 1931 Japan invaded Manchuria, and in January 1933 Adolf Hitler became Germany's chancellor. On October 14, 1933, Germany withdrew from the League of Nations. The paradoxical flavor of this period was further conveyed in February 1932 with the convening of the League of Nations World Disarmament Conference. The American position before this body was reflected in President Herbert Hoover's proposal that bombers be abolished: "This will do away with the military possession of types of planes capable of attacks upon civil populations and should be coupled with the total prohibition of all bombardment from the air." The conference made little progress on limiting air weapons, however, and in June 1934 it broke up.

In view of the deteriorating international situation, the Army reorganized, and in 1933 called on the Air Corps to improve its effectiveness. The resulting air plan emphasized coastal air defense, bombardment, attack, and pursuit. At the request of the secretary of war, it was reviewed by a General Staff group under the deputy chief of staff, Brig. Gen. Hugh Drum. The Drum Board Report of 1933 proposed that a General Headquarters Air Force be formed to direct strategic air operations along with traditional ground support activities. However, a GHQ Air Force was not immediately formed and during the winter of 1933 and 1934 a crisis involving the Air Corps erupted. Postmaster General James Farley had suddenly cancelled the employment of private carriers because of contractual irregularities. President Roosevelt directed the Air Corps to take over vital domestic mail routes. Maj. Gen. Benjamin D. Foulois, the Air Corps chief, promised "no difficulty" in delivering the mail. Unfortunately, in February 1935 terrible weather ensued and Air Corps flyers did not have the necessary skill or night and instrument flying equipment. Within three weeks there occurred a series of accidents, which resulted in the loss of ten lives. In all, before the promulgation of new commercial delivery contracts, the Air Corps suffered twelve deaths and sixty-six crashes. Substantial public and congressional criticism followed and in April 1934 former Secretary of War Newton Baker convened a special board to consider the role and organization of military aviation—the War Department Special Committee on the Army Air Corps.

The Baker Board concluded that "independent air missions had little if any effect upon the issue of battles and none upon the outcome of World War I." The situation had not changed since the end of the war; therefore, only minimal military forces were required. Where nations bordered one another aviation had added to the power of the offensive, but where contending states were far apart the defense had gained. Aviation, observed the board,

has vital limitations and inherent weaknesses. It cannot invest or capture and hold territory . . . Bases, land or floating, are absolutely essential to its operations and they have to be protected from land, air, and sea attacks. Opera-

tions of large air forces are dependent on at least fairly good weather . . . Under present developments, in distant overseas flights, all available load capacity has to be devoted to fuel, leaving little space for military munitions. To date, no type of airplane has been developed capable of crossing the Atlantic or Pacific with an effective military load, attacking successfully our vital areas, and returning to its base.<sup>6</sup>

Talk of an "air invasion" of the United States failed to take geography and the state of technology into account, and the cost of aviation remained extraordinarily high. No nation could afford to base its defense on visionary conceptions. The board saw no reason for a Department of Aviation or a Department of National Defense and reiterated its faith in the conventional military organization of air and ground components with the surface forces predominating. Nevertheless, acting on the *Drum Board Report*, the Baker Board recommended the creation of a General Headquarters Air Force comprised of air combat units capable of either ground support or independent operations. This force would be under the control of the General Staff in peacetime and the commander of the Army Field Forces in wartime. The chief of the Air Corps would be responsible for procurement, supply, and training under normal War Department direction.

Some in the Air Corps interpreted the action of the board as both a move to head off the drive for a separate air arm and an effort to strengthen the hold of the General Staff on the Air Corps. Mitchell charged that it was just another "whitewash." However, others—including Col. Henry H. "Hap" Arnold—were willing to go along with the proposal, realizing that the road to autonomy would be a long one. The report was signed by all members except James H. Doolittle, then a major in the Air Corps Reserve, who observed that the nation's security would be dependent on an adequate air force. He further stated:

This is true at the present time and will become increasingly important as the science of aviation advances and the airplane lends itself more and more to the art of warfare. I am convinced that the required air force can be more rapidly organized, equipped, and trained if it is completely separated from the Army and developed as an entirely separate arm.<sup>7</sup>

If the air arm were to remain part of the Army, suggested Doolittle, then it should have its own budget and promotion list and be removed from the control of the General Staff. Failing this, the Air Corps should be expanded under the direction of the General Staff, as the board had recommended. The trouble, Doolittle later recalled, "was that we had to talk about air power in terms of promise and prophecy instead of . . . demonstration and experience." He was an engineer, a technologist, and a conceptualist of great foresight who eclipsed his colleagues on the Baker Board. In retrospect, Doolittle noted that members of the board "honestly believed that coordinated action through some kind of committee . . . like the Joint Army-Navy Board was just as good as a unified command—that is, they believed it until December 7, 1941."

On March 1, 1935, the GHQ Air Force was established under the leader-ship of Brig. Gen. Frank M. Andrews, with Brig. Gen. Hap Arnold commanding the 1st GHQ Wing at March Field, California, Brig. Gen. Conger Pratt commanding the Second Wing at Langley Field, Virginia, and Col. Gerald Brant commanding the Third Wing at Barksdale Field, Louisiana. The War Department's announcement of the formation of the GHQ Air Force stated:

The creation of this new organization, which is regarded by military authorities as of tremendous importance to the national defense, comes as a result of many months of study by the General Staff . . . A consideration of the interplay of forces in different defensive regions, together with a recognition of the increasing strategic mobility of modern air forces, led to the inevitable conclusion that we must have a centralized air force, operating under the control of the commander of all theatres of land warfare. This force will be highly mobile and will have great striking power.<sup>10</sup>

Before the creation of the GHQ Air Force, air units had been controlled under nine Army Corps areas throughout the country. The formation of this air striking force—in a sense, America's first air force—constituted an important step in the evolution of American air power as it centralized operational command over all Air Corps combat units under a single airman.

Nonetheless, the questions of the control of air forces and their proper functions persisted. The GHQ Air Force reported to the Army chief of staff and remained a tenant on bases. The Air Corps was split between the Office of the Chief of the Air Corps (OCAC) and the GHQ Air Force. This organization saw the OCAC controlling funds, personnel, and procurement. The GHQ Air Force was responsible for combat efficiency, but administratively, tactical bases were under Army Corps area commanders. When considering air matters, the Army



Brig. Gen. Henry H. "Hap" Arnold, 1st GHQ Wing commander at March Field, California, during the mid-1930s.

chief of staff and the War Department General Staff dealt with the commander of the GHQ Air Force, the chief of the Air Corps, and the Army Corps area commanders. The Air Corps 1936 *Browning Board Report* concluded that "the present organization is unsound" and recommended that the GHQ Air Force be consolidated under the OCAC. Subsequently, the War Department exempted Air Corps stations from Army Corps area control. <sup>12</sup>

The GHQ Air Force could be seen as a compromise between the advocates of air independence and the officers of the War Department General Staff, who persisted in the view that the major air mission was the support of the Army ground forces. Both groups could point to the new organization with some satisfaction for it also could perform independent operations. Maj. Gen. Benjamin D. Foulois termed the creation of the GHQ Air Force "the most important and forward-looking single step ever taken to secure a military unit of adequate striking power to insure to the United States a proper defense in the air." Still, the organization of the GHQ Air Force preserved War Department control of the air arm.

As commander of the GHQ Air Force, Andrews consistently emphasized that air power should be separately organized and that bombardment aviation should be the foundation of the air forces. The evolution of the B–17 bomber in the 1930s convinced him that bomber forces would play an important role in future wars. The airplane, Andrews believed, operated in another element, with the purpose of destroying the enemy's will to fight. The Air Corps, with its own budget, should be organized under the secretary of war, coequal with the Army.

While Andrews, as head of the GHQ Air Force, advocated more B–17s and also came out strongly for air independence, Maj. Gen. Oscar Westover, who succeeded Foulois as Air Corps chief, had all along been opposed to air independence. He cautioned against contentiousness with the War Department:

We of the arms and services must bear well in mind that there sits at the seat of government a group of men who have impartially at heart the well being of all of us and whose perspective is not clouded by too close an association



Maj. Gen. Oscar Westover, air chief in the 1930s and an opponent of an independent air arm.

with any one element. Their programs and plans are more than likely to have good reason and sound common sense in strong support. It behooves every intelligent military man to find out what that program is and support it without equivocation . . . I have been in a position to be conversant with the War Department's plans and policies for military aviation and I can say positively—I cannot emphasize too strongly—that the military leaders are fully conscious of what the nation needs for air defense and they are sparing no effort to provide it.<sup>14</sup>

Westover noted in early 1937 that "any measures to create a separate air department of the government, or even a separate set-up of aviation within the War Department would at this time be a step backward." Westover wanted the Air Corps to focus on the continued development of the existing organization, stressing teamwork and getting along with the War Department General Staff. It should be noted that few Air Corps officers serving under Westover felt as he did, but in the mid-1930's they thought it best not to openly challenge the situation between the Air Corps and the War Department. They agreed with Andrews, whose position was that the GHQ Air Force should have a chance to develop. Also, as America's entry into World War II drew ever closer, the Air Corps focused more and more on honing its forces as part of the vital preparedness program. Andrews, who disagreed with Westover, nonetheless, made clear his "sincere belief," once the GHQ Air Force was established, that a separate Air Corps would be "a dead issue for many years to come. The GHQ Air Force is part of the Army and it is our interest and duty to keep that fact constantly in mind, for therein, for many years at least, I believe lies the best chance of developing air power and the best interest of national defense." <sup>16</sup> As a realist, in the mid-1930s, Arnold agreed, noting that the GHQ Air Force was "as much of a revolutionary step as should be tried at this time. We can't at this stage stand on our own feet.<sup>17</sup>

The GHQ Air Force as commanded by Andrews pointed the way in a real sense to the evolution of air power and air organization during World War II. It permitted the airmen in exercises to coordinate air operations with the ground forces and at least gave some substance and even hope to those who pushed for an independent air arm. After Andrews was reassigned in February 1939, the GHQ Air Force was placed under the Office of the Chief of the Air Corps, an important move that made the GHQ Air Force commander directly responsible to the chief of the Air Corps and not to the War Department chief of staff.

In October 1940, however, a step backward occurred when the GHQ Air Force was placed under the control of the commander of Army Field Forces and air station complements were again put under the control of Army Corps area commanders. At the same time, Marshall appointed Arnold as acting deputy chief of staff for air, a position from which he could mediate between the OCAC and the GHQ Air Force. This reversion to split command existed until June 1941, when the Army Air Forces (AAF) was established. This setback was ameliorated by the close relationship between Arnold and Marshall and by the appoint-

ment in December 1940 of Robert A. Lovett as special assistant to the secretary of war. He was subsequently redesignated the assistant secretary of war for air, in the post that President Roosevelt had abolished in 1933.

In the mid-1930s General Arnold backed Andrews in giving the GHQ Air Force a chance to succeed. Eventually, he noted, a "Department of National Defense" would come into existence. The Air Corps was not yet ready to take the steps to independence. Following Westover's death in an air crash in 1938, Arnold, having succeeded Westover as Air Corps chief, stressed to the Senate Committee on Military Affairs: "With the expansion that is confronting the Air Corps now I would dislike very much for us to be thrown out on our own without any of the help . . . we can get right now from the rest of the War Department. That is the way we feel now." And with Col. Ira C. Eaker in early 1941, Arnold stated that the air arm did not have sufficient "essential services" to go out on its own. An independent air force was not something that could be rushed. He suggested that there were intermediate steps that would have to be taken, with the ultimate objective always in mind.

The fact remained, however, that in the interwar period airmen could not demonstrate the efficacy of their theories in combat. The War Department General Staff, not having the ability to bridge the theoretical gap and conceptually vault into the future, failed to foresee the impact of military aviation upon future conflict. "The treatment of the Army Air Corps prior to World War II by Army decisionmakers," observed Gen. Jacob E. Smart, who helped plan the Ploesti raid in that war and served under Arnold in AAF Headquarters,

stemmed from their perceptions of how the next war would be fought and their limited understanding of the potential capabilities of air power. Those conscientious men were the products of their respective experiences, education, and imagination. They were unable to foresee air warfare becoming significant other than as a supporter of ground warfare and were skeptical of the airmen's assertions about potential air capabilities.<sup>19</sup>

Maj. Gen. Haywood S. Hansell, Jr., World War II air planner and bomber commander, noted in retrospect the difference in viewpoints between the Army's ground officers and air proponents of strategic bombardment: "Proponents of the two ideas soon lost all sense of proportion in the very intensity of their zeal. There was a tendency of the airmen to advocate strategic bombing to the exclusion of all else, and of the ground soldiers to view bombardment simply as more artillery." If the General Staff belittled the airmen's claims, "it must also be admitted that at least in some very small measure we may possibly have overstated our powers and understated our limitations." <sup>20</sup>

## II

# **ORGANIZING FOR WAR**

Between the end of World War I and the establishment of the Army Air Forces (AAF) in June 1941, just months before Japan's attack on Pearl Harbor, many proposals to create a separate Department of Aeronautics had surfaced in Congress. Between December 1941 and March 1942, Congress introduced two pieces of legislation to create an independent air force. The prosecution of the war and the buildup of the air forces were major priorities. At the same time, public support for an independent air force accelerated, reflecting increased pressure from Congress to give the air arm more freedom. Marshall and Arnold agreed, however, that consideration of an independent air force should be put off until the end of the war. They conceptualized a wartime AAF as an autonomous air arm operating under the principle of unity of command. Their principle effort, they agreed, should be to build up the air forces as quickly as possible.

Actually, the United States was unprepared for global war. It had, however, made some preparations, chiefly upon the insistence of President Roosevelt, who had become alarmed at the pivotal role played by the Luftwaffe in Nazi Germany's early victories. He noted the "increased range, increased speed, and increased capacity of airplanes abroad" and advocated an enormously accelerated aircraft production schedule. The call for mass production, was one thing; the reality of following through was another.

Japan's attack on Pearl Harbor was a surprise, consistent with the manner in which it had initiated previous wars. It caught the United States unprepared for global conflict, but, in fact, since 1938 developments in the Far East and Europe had convinced Roosevelt to build up the air arm. In a message to Congress in January 1939, he noted: "Weapons of attack were so swift that no nation can be safe in its will to peace so long as any powerful nation refuses to settle its grievances at the council table. For if any government bristling with implements of war insists on policies of force, weapons of defense give the only safety."

The president convinced Congress to appropriate funding to strengthen the Army Air Corps. Responding to Roosevelt's thrust and a recommendation from Secretary of War Henry L. Stimson, Maj. Gen. Hap Arnold, the Air Corps chief, in the spring of 1939 had established the Kilner Board to make recommendations for future development and procurement programs. The board's report, issued in late June 1939, specified aircraft and equipment to be procured by 1944, including a very long range heavy bomber. This was, in effect, the beginning of the B–29 program.

Arnold, in a desperate race against time, in 1939 had put out the alert to U.S. aircraft manufacturers to tool up for expansion. This was in line with the

president's message to Congress in January 1939 directing a major expansion of the Army Air Corps, which would reach its peak during the wartime year of 1944. Arnold himself took the lead, buttressed by his long association with the leaders of America's aircraft industry. Making known what the air arm required, he promoted the standardization of equipment. In the three years before Pearl Harbor, the Air Corps was authorized to spend about \$8 billion and to procure about 37,500 aircraft.

Hitler, meanwhile, in September 1939, unleashed his onslaught against Poland, initiating World War II in Europe. Subsequently, Secretary Stimson emphasized that

air power today has decided the fate of nations. Germany with her powerful air armadas has vanquished one people after another. On the ground, large armies have been mobilized to resist her, but each time it was that additional power in the air that decided the fate of each individual nation. As a consequence, we are in the midst of a great crisis. The time factor is our principal obstacle.<sup>2</sup>

The task of building an American air force was not easy. Arnold's jousts in 1939 and 1940 with Roosevelt and his associates, primarily Secretary of the Treasury Henry Morgenthau, over the allocation of aircraft production, placed him in a precarious position with the president. Nonetheless, to Arnold nothing was more important than building up the air forces when it seemed inevitable that



U.S. Navy ships under aerial bombardment by the Japanese at Pearl Harbor, Hawaii, December 7, 1941. The surprise attack propelled the United States into World War II.

the United States would ultimately enter the conflict. Roosevelt, like Arnold, was committed to the production of heavy bombers. In May 1941 FDR wrote to Secretary of War Stimson that the "effective defense of this country and the vital defense of other democratic nations required a substantial increase in heavy bomber production." He further asserted: "I know of no single item of our defense today that is more important than a large four-engine bomber capacity." FDR and Arnold had in common the belief that people could always do more than they thought they could. In this regard, Roosevelt put great pressure on Arnold, who in turn put great pressure on his staff. Robert A. Lovett, assistant secretary of war for air, subsequently termed Roosevelt's desired production figures "utterly unattainable."

Roosevelt, who saw aircraft shipments to the Allies as part of the Lend-Lease program, determined to keep the British in the war, demanding that they be sent production-line aircraft. It is certainly conceivable that when Roosevelt directed the rearming of America, with an emphasis on aircraft manufacture, he envisioned much of the nation's weaponry going to Britain and France to stem the Nazi tide. This of course presented Arnold with a large problem as he feverishly attempted to build an air force: "The world situation demanded it." It was not that the Air Corps chief failed to understand or sympathize with Roosevelt's view. Arnold at heart certainly wanted to support the British. "My obligations to my own country and my own Corps were definite," he recalled. "Between helping our Allies," he believed, "and giving everything away, a realistic line must be drawn, or there would never be a United States Air Force except on paper."

The heat on Arnold intensified, but at the same time, he had to build up his own air forces. The AAF, he emphasized, "was rapidly changing its status from one of peace to one of war." General Marshall noted that the attempt to fill British aircraft requirements presented "a tremendously complicated task here in Washington." And Arnold noted that

on top of other headaches there was the daily business of satisfying White House, congressional, and War Department superiors who were constantly receiving phone calls, visits, and letters from people, official and unofficial, American, British, French, Dutch, Chinese, Polish, Russian . . . and what not, criticizing the air forces' procedures, offering free advice and recommendations, or demanding a priority share of our equipment.<sup>9</sup>

As one historian commented, "American air power was getting strangled in the cradle by an excess of presidential generosity."

In fact, Arnold feared that he was about to lose his job. He was especially perturbed at Morgenthau, noting that it was not the secretary of the treasury's responsibility to build up the air forces. That responsibility belonged to Arnold: "To build up our air force was an obligation that I had to Congress, to the president, to the people of the United States. It was a job that was still ahead of me, for we had no air force." Arnold complained in one of his more pessimistic

moments: "It was the rosy dream of some Americans that we could save the world and ourselves by sending all our weapons abroad for other men to fight with. If this priority thus deprived our own air power of even its foundation stones, certain people seemed to take the view that it was just too bad." <sup>11</sup>

Meanwhile, in late 1940 and early 1941, Robert A. Lovett, soon to become assistant secretary of war for air in April, weighed in to support Arnold's and Marshall's contention that aircraft deliveries to Britain were gravely impeding the buildup of the American air forces. As noted, Roosevelt saw aircraft deliveries to the British as integral to Lend-Lease. Lovett, however, was convinced that air power would play a crucial role in the coming conflict and he agreed with Arnold that the air forces needed to be brought up at least to minimum strength as quickly as possible. In the spring of 1941 he declared that it was time to allocate the majority of U.S. aircraft production to Arnold's forces rather than to the British. Lovett was also concerned with making certain that Arnold had enough pilots and planes to train American airmen: "I submit that we will never have an air force unless we retain an adequate nucleus of trained pilots to build it up." 12

Lovett, a Navy pilot in World War I, had been part of the undergraduate Yale flying unit. His wartime experience convinced him of the offensive potential of bomber aircraft. Between the wars, while he was affiliated with Brown Brothers Harriman, the New York international investment banking house, Lovett made numerous trips to Europe, and by 1940 had become increasingly impressed with the Luftwaffe, especially after the blitzkreig in Poland. Arnold and Lovett hit it off from the start. Lovett "possessed the qualities in which I was weakest," Arnold admitted. He called Lovett "a partner and teammate of tremendous sympathy, and of calm and hidden force." <sup>13</sup>

As assistant secretary of war for air, working with Stimson, Lovett concentrated on the aircraft procurement process, which he initially found to be in "a hell of a mess." The aircraft industry required more attention to military requirements and standardization. Then there was the Air Corps' lack of reliable data on equipment and personnel. Lovett was astonished, commenting that private industry could never function under such a lack of fundamental information. Arnold informed his staff in August 1942 that "Lovett has lost faith in our figures." Lovett proceeded to establish his own reporting system for production scheduling and pilot training. One of his toughest challenges was to keep Arnold and Roosevelt moored to reality. The president's and the air chief's insistence upon vastly optimistic production goals was frustrating. Lovett called the aircraft production schedule for 1943 "a fantasy," which he could not support because it was "likely to cause false hopes initially and bitter disappointment later." 14

Overall, Lovett argued for increased autonomy for the air arm, which meant reorganization. He also favored increased production of bomber aircraft. "At present," he stressed, "our air force is operating under an organization, the command and control of which is designed primarily to insure direct support of the ground forces and not the entire field of operations open to air warfare." <sup>15</sup>

The issue of air independence was tricky. Marshall agreed with Arnold and Lovett that more autonomy and greater flexibility were necessary. Lovett, for his part, agreed to hold the line by opposing congressional pressure for independence: "While an independent air force may be a desirable ultimate aim," he explained, "provided the military organization of this country is redesigned to embrace a third arm, it is not . . . necessary, desirable, or prudent at this time." True independence, in Lovett's view, could not be created until the air arm could handle its "housekeeping and service functions." Immediately required was an internal reorganization.

In summary, the major players agreed that air independence should be put off. The major task in early 1941 remained the building up of the AAF. The War Department, Lovett pointed out, is drawing plans "to substitute reasonable auton-



President Franklin D. Roosevelt.

omy for independence." He recommended "against the creation of an independent air force at this time . . . Regardless of the merits of the idea in theory, it is subject to the generally accepted rule that a good idea, executed at the wrong time, becomes a bad idea." Lovett also pointed out that General Marshall was in the midst of planning to give airmen autonomy within the War Department structure. The Air Corps, of course, supported this thrust, in a period in which it was building up toward what Lovett termed "war-time efficiency." The air forces, he said, "must first learn to walk before they run."

General Marshall found himself in the middle of tense relations between FDR and Arnold. As Army chief of staff, he needed to build up both the Air Corps and the ground forces. Forrest Pogue, Marshall's biographer, wrote that to Marshall, "the president's requirements were almost more than he could bear." Like Arnold, Marshall informed Roosevelt that it was not possible at that time to give the British (and the Soviets, the French, and the Chinese) everything they wanted and at the same time build an American air force. In this regard, Marshall finessed the situation by saving as much aircraft production as possible for Arnold while giving the Allies whatever he could. Marshall walked a fine line that FDR did not always appreciate.

It was a fact that in 1940, for the first time in its history, the United States was attempting to discern major wartime requirements and its capacity to fulfill them. As noted, in Arnold's view, the British were the major problem. In July



Maj. Gen. Henry H. Arnold, chief of the Air Corps, and Gen. George C. Marshall, chief of staff of the Army. Arnold had an invaluable ally in Marshall as he worked to strengthen the air arm for global war.

1940 the British already had on order 8,275 aircraft from American production plants, almost four times the amount the United States itself had requested. As of December 1940, early plans called for 82,890 aircraft to be built by the end of June 1943, of which, by mid-1940, only about 3,000 had been delivered. Of the approximately 80,000 remaining to be delivered, almost 26,000 were for the British.<sup>20</sup> The year 1941, even prior to Pearl Harbor, marked the transition to a wartime economy, when preparedness gave way to the demands of global war.

An example of Roosevelt's enthusiasm for aircraft and bombing concerns his approval of a scheme—which was never consummated—to send B–17s to China. In late 1940 the president, outraged at the raping and pillaging committed

100 fighter aircraft.<sup>21</sup>

by the Japanese Imperial Army in East Asia, expressed the desire that Tokyo should be bombed to teach the enemy a lesson. Morgenthau proposed the idea to Chinese officials, including Foreign Minister T. V. Soong. In November and December 1940 Claire L. Chennault and the Chinese Air Force were brought into their discussions. The Chinese, as well as Roosevelt, were enthusiastic. However, in late December, General Marshall sank the notion, emphasizing that the Air Corps did not have enough B–17s for its own purposes and thus could not afford to send any to China. Instead of B–17s, the Americans agreed to send the Chinese

The British, according to Arnold, desired just about all of America's production. Well aware of the situation, Secretary of War Stimson and Lovett suggested to Arnold that he visit the United Kingdom to see firsthand what the British were up against. In April 1941 he flew to England and spent two weeks talking with every top military and civilian leader as well as Prime Minister Churchill and King George. Arnold was much taken with British fortitude. He cemented a relationship with Air Chief Marshal Charles "Peter" Portal, head of the Air Staff of the Royal Air Force (RAF). Upon his return, Arnold in early May 1941 briefed President Roosevelt in a comprehensive presentation. The air chief noted that it may have been the first time that the president and his cabinet members had received a complete report on the European situation from the point of view of the British military. Roosevelt was duly impressed, and according to Stimson, the presentation marked Arnold's exit from FDR's doghouse.

The relationship between George Marshall and Hap Arnold was of crucial importance as they worked to solve the many difficult issues facing the air arm in the massive buildup before America's entry into the war. According to Gen. Laurence Kuter, Arnold and Marshall enjoyed a unique relationship:

It defied description . . . no banter between old pals . . . They were simply two senior officers who had known each other for thirty years with mutual friendship. I never heard them call each other by nickname or first name. Without question, Arnold had great respect for Marshall. I suspect that Marshall had a lot of affection for Arnold. I never heard them argue, though they may have done so in private. Marshall was always senior but I never heard of his pulling rank over Arnold. Arnold was free to announce his intentions and plans. I never heard of him asking Marshall's permission. Theirs was a unique top-side relationship. 22

In mid-1940 Arnold's view dovetailed with Marshall's. The air chief cautioned that a change might impede the buildup that he was as quickly as possible attempting to accomplish and he agreed that air independence should be put off, especially since Marshall had determined to see that the air arm received the necessary autonomy, flexibility, and equipment. Marshall had also been thinking in terms of a reorganization of the entire War Department.

In this regard, pressure in Congress to legislate air autonomy continued to grow. Lovett, after discussions with Arnold and Brig. Gen. Carl A. Spaatz, chief

of the Plans Division, presented the case for reorganization to Secretary of War Stimson, for whom the thorny issue was determining how far to go with air autonomy while still keeping the air arm part of the Army. As war raged in Europe, Stimson believed that it was necessary to move quickly before Congress acted on its own. Marshall then stepped in and agreed that the solution was a revision of Army Regulation 95-5, which, in June 1941, established the Army Air Forces. It should be noted that this revision also gave Arnold an Air Staff, which would formulate plans and policy. Despite the Air Staff, Arnold continued his habit of targeting trusted individuals to undertake specific missions for him, not only in the headquarters, but all over the world. Arnold had created his own coterie of advisors, formally called the Advisory Council, which, during World War II, included Cols. Jacob E. Smart, Fred M. Dean, Charles P. Cabell, and Lauris Norstad. One of the Air Staff's first major efforts became the drafting of the AWPD-1 war plan, which described air requirements in the event of war.

After the creation of the Army Air Forces in mid-1941, the virtual equality of the AAF with the Army and Navy became obvious with Arnold's presence on the Joint Chiefs of Staff (JCS) and the Combined Chiefs of Staff (CCS) and in AAF representation on the Joint Staff committees. Even before the United States entered the war, Arnold had taken his place at the "high table" of Allied policy formulation. In 1941 American-British Conversations (ABC-1) in Washington led to the creation at the Arcadia Conference in January 1942 of the Combined Chiefs of Staff representing both British and American senior leaders with Arnold sitting in for U.S. air power. Arnold was subordinate to Marshall, but the Army chief of staff insisted that he be present with his "opposite number," Air Chief Marshal Portal of the RAF, when the CCS considered grand strategy. The 1941 ABC-1 talks had emphasized that in the event of a two-ocean war the major effort would first be in Europe. This would include a sustained air offensive against Nazi Germany. Primarily defensive operations would be mounted in the Pacific theater.

Roosevelt took his role as commander-in-chief seriously and he acted upon it. In July 1939 he had brought the Joint Army-Navy Board into his newly created Executive Office. In 1942 the Joint Board was superseded by the Joint Chiefs of Staff. And although the secretaries headed their own departments, Henry Stimson at War, and Frank Knox at Navy, the military service chiefs reported directly to the president. The Joint Chiefs of Staff, which, as mentioned, superseded the Joint Board system, was never formally established; it came into being in February 1942 to coordinate policy to present to its British counterpart, who had a well-established joint committee system. Immediately after Pearl Harbor, it became necessary for the military to present common positions to the president for his approval. Along with Prime Minister Churchill, the British chiefs of staff arrived in Washington in December 1941 to attend the Arcadia Conference. It was there that the British proposed to leave a team in Washington to attend meetings with the Joint Chiefs.

The terms "Joint" and "Combined" reflected the thinking of the British chiefs of staff, the former referring to interservice affairs in either country and the latter referring to British-American collaboration. Deliberations of the Combined Chiefs of Staff were meant to frame broad requirements reflecting strategic policy and the employment of Allied forces. The British and Americans never expanded the combined system to include the military staffs of other nations. However, the Anglo-American military staffs consulted from time to time with representatives from other Allied nations on military issues being considered by the American and British chiefs of staff.



Assistant Secretary of War for Air Robert A. Lovett. His thorough knowledge of international business and industrial practices proved crucial to General Arnold's enormous pre-World War II aircraft production program.

As commander-in-chief, Roosevelt came to rely on the Joint Chiefs of Staff for strategic direction and operational planning. The Joint Chiefs reported directly to the president; the overall success of this arrangement ironically posed problems after the war when naval leaders advocated reliance on this system as opposed to postwar defense reorganization. Although FDR rarely, if ever, interfered in strictly tactical decisions, he played a significant part in overall strategy. In late 1938 he called for a production capacity of 10,000 combat planes annually; in May 1940 he accelerated it to 50,000. In July 1942 he strongly backed Operation TORCH, the invasion of North Africa, thus diverting air forces from Europe. His decision for TORCH overrode the direction of previous U.S. military policy.

Arnold coveted his role in formulating policy and strategy at the highest levels: "The Army Air Forces are being directly controlled by the Joint Chiefs of Staff and the Combined Chiefs of Staffs more and more each day. Consequently, AAF representation in the Joint and Combined planning staffs has become a position of paramount importance to me."<sup>23</sup> Roosevelt underscored this: "My recognition of the growing importance of air power is made obvious by the fact that the commanding general, AAF, is a member of both the Joint and Combined Chiefs of Staff. The Air Forces, both in the Army and in the Navy, have a strong voice in shaping and implementing our national military policy."<sup>24</sup>

Control of long-range air operations was of great importance to Arnold. As the official U.S. Army history notes: "The success of the makeshift organizational arrangements in World War II did not conceal the ultimate importance in future national defense at arriving at a clear-cut definition of the functions and status of the Air Forces in relation to both the Navy and the rest of the Army." According to historian Ray S. Cline:

It was clearly in the interest of the common military effort, as it was clearly the intent of General Marshall, to preserve the system whereby the Army Air Forces exercised great influence in determining the way in which U.S. Army air units were employed, but whereby OPD (the War Department's Operations Division) monitored air plans and operational orders in the interest of the ground-air team as a whole. <sup>26</sup>



Consolidated B-24 Liberators taking shape on the factory floor. Industry went all out, working around the clock to meet the Army's unprecedented demands for aircraft of all types.

ORGANIZING FOR WAR

# problem of air organization

As war raged in Europe and the Far East, the problem of air organization turned critical from 1939 to 1941. General Arnold commented that in the 1930s "air power was the unseen guest at those grim conferences which marked the Nazi rise to power." On the eve of U.S. entry into the war, Marshall's and Arnold's problems were twofold. First, they had to streamline the General Staff, in line with FDR's desire to quickly build up air power; and second, they had to reorganize to foster efficient and effective wartime operations. The reorganization would provide Arnold and the Air Staff with sufficient clout to move their requirements with dispatch through the War Department General Staff.

Arnold, and in late 1940, Lt. Gen. George Brett, acting chief of the Air Corps, described to Marshall how exceedingly difficult it was for them to ram air requirements through the General Staff. Marshall faulted the General Staff for having "lost track of the purpose of its existence. It had become a huge, bureaucratic, red-tape-ridden operating agency. It slowed down everything." Moreover, the Army chief of staff was convinced that its officers "had little interest in the air, mostly antipathy, and it was quite marked." Marshall admitted that "everyone" on the Staff was hostile to the airmen, who, he concluded, had something to complain about. Arnold, of course, kept Marshall informed of the problems that the airmen confronted as they endeavored to build up their forces. Marshall, for his part, remained sensitive to air requirements and to the movement within the Air Corps and in Congress to legislate an independent air arm.

Once the United States entered the conflict, Marshall informed the General Staff that it needed to move requirements quickly and that "the time was long past when matters could be debated and discussed and carried on ad infinitum." In fact, the War Department could not cope with the demands of the rapid buildup. In late 1941 and early 1942 Marshall moved to reorganize it. Forrest Pogue, his biographer, described "a whirlwind campaign that was to shake the War Department as it had not been shaken since the turn of the century." Acutely aware of Arnold's needs, Marshall made a special effort to give his air chief as much flexibility as possible:

I tried to give Arnold all the power I could. I tried to make him as nearly as I could chief of staff of the Air without any restraint although he was very subordinate. And he was very appreciative of this. My main difficulties came from the fact that he had a very immature staff. They were not immature in years because they were pretty old  $\dots$  and the less rank they had, the more they were talking about a separate Air Corps. That was out of the question at that time. They didn't have the trained people for it at all  $\dots$  When they came back after the war, the Air Corps had the nucleus of very able staff officers, but that wasn't true at all at the start.<sup>30</sup>

Marshall and Arnold had continually to fend off congressional demands on the question of an independent air force, which they had agreed to put off considering until after the war. They devoted their energies to organizing for victory.

As noted, the revision of Army Regulation 95-5, established the Army Air Forces in June 1941, making Arnold chief of the AAF and providing him an Air Staff, but the larger issue of the reorganization of the War Department General Staff remained unresolved. Marshall, however, had been listening to Arnold and Brig. Gen. Carl A. Spaatz, chief of the Air Staff, who urged the streamlining of the General Staff. Marshall stated in the fall of 1941 that the AAF enjoyed autonomy "within the framework" of the War Department. Arnold now had responsibility for all aviation matters and the AAF could proceed with "unrestricted development."

Arnold saw the creation of the Army Air Forces as another step toward independence. However, the newly formed Air Staff still answered to the War Department General Staff and the airmen did not have their own budget and promotion system. Relations between the Air Force Combat Command and the AAF continued to be as unsatisfactory and divisive as those between the chief of the Air Corps and GHQ Air Force. The excruciating pressure of wartime demands and the attendant breakdown of the General Staff led Marshall and Arnold to allow airmen the ability to organize and control air forces for global warfare. In November 1941, Arnold pointed out that

the development of the air force as a new and coordinated member of the combat team has introduced new methods of waging war... introduction of these new methods has altered the application of these principles of war to modern combat... Today the military commander has two striking arms. These two arms are capable of operating together at a single time and place, on the battlefield. But they are also capable of operating singly at places remote from each other. The great range of the air arm makes it possible to strike far from the battlefield, and attack the sources of enemy military power. The mobility of the air force makes it possible to swing the mass of that striking power from distant objectives to any selected portion of the battlefront in a matter of hours, even though the bases of the air force may be widely separated.<sup>31</sup>

Arnold and Spaatz recommended eliminating the GHQ and forming coequal ground, service, and air forces under the chief of staff of the War Department: "It is clear that the advisability of continuing GHQ as an agency under the War Department . . . is open to question. It is most important that the organization of the War Department be modernized and streamlined to insure maximum efficiency in the prosecution of war."<sup>32</sup>

Upon becoming Army chief of staff in 1939, Marshall inherited a General Staff organization dating back to the National Defense Act amendments of 1920. The organization was adequate for peacetime, but it was clear after Pearl Harbor that a radical reorganization was required. Elting Morison, in his biography of Henry Stimson, notes that by 1940

the military establishment had grown into a loose federation of agencies. Nowhere in this federation was there a center of energy and directing authority. Things were held together by custom, habit, standard operating procedure, regulations, and a kind of genial conspiracy among the responsible officers. In the stillness of peace the system worked.<sup>33</sup>

The specific difficulty was that the General Staff was unable to make decisions. Coupled with the issue of air organization—the relation of the air forces to the overall staff structure—the organizational problem in the wake of Pearl Harbor had become acute.

Just before Pearl Harbor, Marshall had asked the War Plans Division to look into reorganization. Col. William K. Harrison of the War Department and Maj. Laurence S. Kuter of the Air Staff began to develop recommendations. An effective system was lacking. The General Staff had become so bogged down in details that it could not get much done or make timely decisions. Marshall chose Lt. Gen. Joseph T. McNarney to head the 1942 reorganization committee. He emphasized that the General Staff "must not operate and be bothered by minor details." The staff, McNarney said, should make policy and stay out of operations. General Marshall decided to replace the historic horizontal type bureaucracy with a vertical organization of command. The First War Powers Act of December 18, 1941—to expire six months after the end of the war—gave the president the authority to reorganize the federal government and provided Marshall the opportunity to reorganize the War Department.

The March 1942 Marshall reorganization scuttled Army Regulation 95-5 and gave the Army Air Forces virtual autonomy within the War Department. It reduced the General Staff, making it—as Marshall desired—a policy-making staff focused on strategic direction. The reorganization created an Army composed of the War Department General Staff and coequal Ground Forces, Air



The first Air Staff, which was created along with the Army Air Forces. Standing fourth from the left, behind General Marshall, is Maj. Gen. Henry H. Arnold, the new deputy chief of staff for air.

Forces, and Service Forces under the Army chief of staff, a recommendation proposed by Arnold and Spaatz before Pearl Harbor. At the same time, it should be noted that Arnold sat on the Joint and Combined Chiefs of Staff, so that at the



Lt. Gen. Henry H. Arnold, commander of the Army Air Forces, and Air Chief Marshal Charles A. Portal, RAF Air Staff chief. The two worked amicably before and during World War II to ensure close cooperation between the United States and Britain.

highest levels of strategic planning he was an equal to Marshall and Adm. Ernest King. Thus, merely a few months removed from Pearl Harbor, the AAF had essentially gained autonomy and equality with the ground and naval forces. Marshall's rapid reorganization after U.S. entry into the war catapulted the AAF into a position to make an enormous contribution to ultimate victory—without a wartime fight over the contentious issue of air independence.<sup>34</sup>

Subsequently, the AAF received a boost in July 1943 from War Department Field Manual 100-20, "Command and Employment of Air Power." The manual stated: "Land power and air power are coequal and interdependent; neither is an auxiliary of the other." Air superiority, it stated, was the first requirement of major land operations. Air units would be commanded by airmen and generally not attached to ground units. And despite the fact that Marshall and Arnold agreed that the question of air organization should be put off until the war was over, pressure continued to build during wartime, much of it, as noted, in Congress. In August 1943 Senator Pat McCarran suggested to Roosevelt that a "unified, coordinated, autonomous air force should be created in order to help win the war." The president replied that a drastic change in organization during hostilities would not be appropriate and might well hinder the war effort.

At the same time, the Special Planning Division of the War Department General Staff recommended the establishment of a Department of the Armed Forces under a secretary responsible to the president. Serving the secretary would be three under secretaries, one each for Army, Navy, and Air. Each of the services would have a chief of staff. Such an organization, according to the Special Planning Division, would foster unity of command and shorten the war. No concrete action was taken on the War Department proposal.

Congress, however, continued to consider the issue of postwar military reorganization. In March 1944 the House of Representatives appointed the Select Committee on Post-War Military Policy, chaired by Representative Clifton A. Woodrum of Virginia. Appearing before the committee, Brig. Gen. Haywood S. Hansell, Jr., and Assistant Secretary of War for Air Robert A. Lovett stressed unity of command in the field and in Washington. Land, sea, and air forces needed to be employed and coordinated under a single overall command. The Woodrum Committee, in its final report, stated that the time was not right, given the war, to consider proposed unification legislation. Meanwhile, cognizant of congressional pressure, the Joint Chiefs appointed their own committee. The JCS Special Committee for Reorganization of National Defense worked for ten months during 1944 and 1945, interviewing commanders in the theaters of operations and in Washington. The committee's report, published in April 1945, recommended a single Department of National Defense headed by a civilian secretary. The Army, Navy, and Air Force would be placed under a secretary of the armed forces and a single commander of the armed forces. In making these recommendations, the committee remained concerned lest the president's war powers expire before implementation of a reorganization, thus returning the defense establishment to its prewar status.36

Of interest, and a harbinger of things to come, was a minority report issued by Adm. James O. Richardson, senior Navy member of the committee. The admiral opposed a single Department of National Defense. Richardson, who before the Japanese attack on Pearl Harbor, advocated moving the Pacific fleet back to San Diego, favored the status quo of coordination through JCS committees and keeping the air forces part of the War Department. He feared that the Navy would lose its air arm to an independent air force.

# III

# THE AIR OFFENSIVE IN EUROPE

As the greatest catastrophic event of the twentieth century, World War II impacted every corner of society and military affairs. The evolution of warfare contained great lessons and consequences for the air forces and the way they were organized and controlled. It was inevitable that prewar doctrine and organization, once committed to global conflict, would be changed—if not scrapped—by the heavy demands of modern warfare.

During the 1930s the Air Corps Tactical School (ACTS) formulated the doctrine of high-altitude daylight precision bombing, which emphasized strategic strikes against industry and morale. This doctrine emphasized the selection of specific targets whose destruction would collapse the enemy's industrial and social structures. As to the question of fighter escort, Maj. Gen. Haywood S. Hansell, Jr., who helped evolve American bombing doctrine and subsequently commanded bomber forces in Europe and the Pacific, noted:

The absence of fighter escort made performance more difficult and indeed problematical, but it was a vital feature of the method of operation, not the fundamental concept. The B–29 operation in the Pacific was successfully carried out without fighter escort, and their initial strategic purpose was practically identical with that in Europe. Fighter escort may or may not be essential to tactical success; selective targeting was the essence of strategic bombing doctrine.<sup>1</sup>

This concept relied on aircraft technology yet to be developed. As a potentially effective element of conflict, if not yet an instrument of national policy, air power could strike swiftly at the will to resist. "No barrier can be interposed to shield the civil populace against the airplane." So taught the ACTS, which saw war as a consequence of conflicting national aims. The objective of war was "to force an unwilling enemy government to accept peace on terms which favor our policies. Since the actions of that hostile government are based on the will of the people, no victory can be complete until that will can be molded to our purpose." The key was the "peculiar power" of the air arm—the capacity to strike a crushing blow. Could air forces win a war on their own? Whether they could or not, "sound strategy" demanded that they make the effort. This called for their using air power strategically.

For the ACTS, imaginative tactics were required if "air warfare" was to be waged: "We have here, not a useful new weapon to be used as an adjunct to the old, not a new projectile to be included in the family of supporting fire weapons, but an instrument which allows us to adopt a new method of waging war . . . "3

The Air Corps Tactical School could promulgate an air doctrine that featured the strategic offensive and yet depended on aircraft without sufficient range because it was counting on the evolution of aircraft technology and the development of overseas bases.

As we have seen, the Army Air Forces (AAF) and the War Department had reorganized to fight World War II. The questions of the control of air forces and their ultimate employment would be determined by circumstances attending combat operations. AAF leaders had to respond to the demands of total global war, which meant myriad air missions in various theaters. The issues that had plagued air-ground relationships in the interwar period were not altogether absent from the evolution of World War II air operations. In addition to support missions, in both the European and Pacific theaters, air forces were required to mount tactical and strategic operations. Strategic bombing was distinct from tactical air operations in that it did not directly support ground activities. Strategic bombing sought to disrupt the enemy's economy and undermine its morale by sustained, long-term campaigns.

In Europe, during the lead-in to the Normandy invasion, strategic bomber forces of Britain and the United States were under the control of the supreme commander, Gen. Dwight D. Eisenhower. They would execute the Transportation Plan, which aimed to prevent the Germans from reinforcing their troops opposing the invasion. In early 1944 the AAF mounted sustained attacks on the Reich, drawing the Luftwaffe to aerial battle, in the process inflicting punishing blows on the enemy's air force, thus making safer the subsequent Normandy operation.

In the Pacific, different circumstances prevailed. There, long-range strategic bombing played a more prominent, independent role. Early on, the Joint Chiefs of Staff (JCS) directed the mounting of a strategic campaign against the Japanese home islands, once appropriate island bases for the B–29 force were secured. This did not preclude an invasion if long-range bombing and blockade failed to induce the enemy's surrender.

After war had broken out in Europe, a series of Anglo-American meetings held in early 1941 resulted in joint plans that described the European theater as decisive and forecast an air offensive and potential invasion of Europe. In concert with these plans, the Air War Plans Division promulgated AWPD-1, submitted in August 1941 at President Roosevelt's request. AWPD-1 outlined a sustained air campaign against Germany and, if necessary, an invasion of the continent. Target systems included electric power, transportation, aircraft production, petroleum, and synthetic oil. The plan further noted: "If the morale of the people is already low . . . then heavy and sustained bombing of cities may crush that morale entirely." If morale had not been depressed, area bombing might stiffen the people's will. Daylight missions deep into Germany could be flown without escort; however, an escort aircraft should be developed "for test without delay."

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Neither Britain nor the United States after the Japanese attack on Pearl Harbor was prepared immediately to conduct a bombing offensive against Germany; both nations lacked bombers and crews. To make matters worse, the Royal Air Force (RAF) had miscalculated that it could bomb in daylight without sustaining unacceptable losses. Finding its losses severe, the RAF turned in April 1940 to night bombing but was unable to hit industrial targets with precision. Consequently, in 1942 Bomber Command turned to area bombing. By the end of 1942, under Air Marshal Arthur Harris, Bomber Command was committed to night area bombing.

Meanwhile, Arnold had emphasized that precision daylight bombing "as planned by the Eighth Air Force and for which it is equipped and trained, can be estimated conservatively as having twice the effectiveness of the broad, area-target, night bombing for which the RAF is equipped and trained." He firmly believed (and Spaatz and Eaker concurred) that German morale could be broken with the result that Allied troops would have a comparatively easy time applying the final touch. After Germany fell, Japan could be knocked out without great difficulty. Air leaders realized that early, simultaneous air campaigns against Germany and Japan would not be possible. These assumptions formed the basis of AWPD-42, completed in September 1942. It envisioned a combined bomber offensive with the AAF conducting daylight operations and the RAF bombing at night. The plan made no mention of escort fighters since high-altitude daylight bombing (from 20,000 to 25,000 feet) was still considered feasible despite enemy anti-aircraft and fighter defenses. AWPD-42 remained the primary air plan until the Casablanca Conference in January 1943.

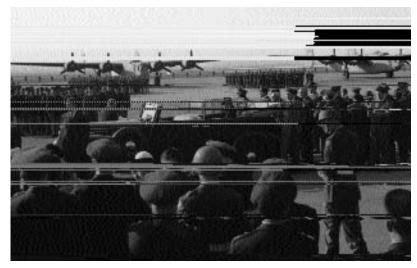
American strategy calling for unescorted bomber formations followed doctrine established between 1935 and 1942. Airmen had reached the conclusion that long-range fighter escort was not technically feasible as it would require a multi-engine aircraft, which would, in effect, not be a fighter at all. If a fighter could be designed with sufficient range to accompany the bombers, it would not be able to bring down enemy interceptors. The RAF had reached the same conclusion shortly after the war began. The Army Air Forces thus calculated that B–17s and B–24s flying in tight formation could generate enough defensive fire-power to prevail. The Schweinfurt and Regensburg raids in 1943 proved that they could not.

Eaker, concerned about Germany's increasingly potent defense, had hoped that P–47s could do the escort job, but they arrived in England without external fuel tanks and so lacked sufficient range. Air Marshal Harris felt confident that if VIII Bomber Command joined the RAF at night Germany might be knocked out of the war. A thousand bombers per raid instead of a few hundred, he figured in April 1942, "and we've got the Boche by the short hairs." Successful saturation raids in May and June 1942 convinced him that gigantic attacks would annihilate the enemy. Harris believed that the Germans would circumvent the effects

of selective bombing—there were no "panacea" targets—thus they could only be defeated if their towns were destroyed. In July 1942 Winston Churchill observed that "the severe, ruthless bombing of Germany on an ever-increasing scale will not only cripple her war effort . . . but will also create conditions intolerable to the mass of the German population . . ."<sup>7</sup>

In January 1943 the point at which the Americans had to defend daylight attacks when they were not proving viable came during the Casablanca Conference. At Casablanca Arnold called on Eaker to convince Churchill that daylight bombing could work and was in the best interest of the common cause against Hitler. Spaatz and Andrews also spoke with Churchill and Arnold had discussed with him "long and hard" the importance of continuing daylight precision bombing, before talking to Eaker.

Eaker told Churchill that VIII Bomber Command had been held back by inexperienced crews, the lack of long-range fighter escort, the commitment to Operation TORCH (the North African invasion), and poor weather; nonetheless, the Eighth's loss rate during the day was lower than the RAF's at night. For every U.S. bomber downed, the Germans lost between two and three fighters. Eaker believed that daylight and night bombing were not mutually exclusive. Daylight bombing would augment the night effort, being more accurate, especially against small targets, and the Germans would be unable to rest. Fires set by day would guide the British at night, in an around-the-clock offensive. Eaker argued forcefully that the AAF was trained for day operations; should it operate at night, its



Help for the Allies. President Roosevelt, even before the United States entered World War II, pledged to provide moral and material support under the Lend-Lease program to nations fighting the Axis powers. In a ceremony at Bolling Field, near Washington, D.C., he presents B-24 Liberators bound for Europe.

losses would increase. It would need months to prepare for effective night operations.8

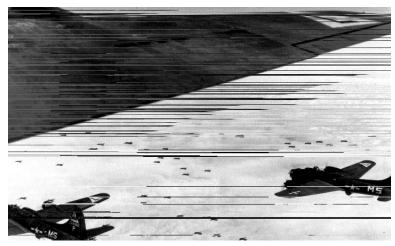
According to Churchill, Eaker pleaded his case "with powerful earnestness, skill, and tenacity."9 The prime minister, although not persuaded, decided to go along with daylight bombing. "We had won a major victory," Arnold recalled, "for we would bomb in accordance with American principles, using the methods for which our planes were designed." On January 21, 1943, the Combined Chiefs of Staff issued the Casablanca Directive for the joint bomber offensive, whose primary objectives were "the progressive destruction and dislocation of the German military, industrial, and economic system, and the undermining of the morale of the German people to a point where their capacity for armed resistance is fatally weakened."11 This directive established major target systems: submarine yards and bases, the aircraft industry as well as other important industries, transportation, and oil. "We shall not only destroy industrial objectives," Arnold insisted, "[we shall also destroy] the moral fibre of the people to resist." Arnold's statement was in line with his call for the "continuous application of massed air power against critical objectives." In June the Combined Chiefs approved the so-called POINTBLANK offensive. It made fighter plane production the critical target. The crippling of that target would help make the planned Allied invasion a success. In fact, at Casablanca, the Allies agreed that to secure the invasion of the European continent, they had to gain air supremacy over the Luftwaffe, to wear it down in a war of attrition in the air.



Air power presence at the Casablanca Conference. Lt. Gen. Henry H. Arnold, shown standing behind President Roosevelt and General Marshall, made sure that Army air concerns were fully addressed at the highest levels of civilian and military Allied discussions during World War II.

The issue of area as opposed to precision bombing was not settled. With the combined bomber offensive, the British and the Americans continued the tactics for which they were best suited. The British area-bombed at night and the Americans pursued daylight raids against selected targets. General Hansell later concluded that if the AAF had been forced into night bombing the entire course of the war might have been changed. The Luftwaffe would have been tougher to defeat and the success of the Normandy invasion would have been jeopardized.

But Eaker was worried. "There is no question," he acknowledged, "that our bomber losses will be greatly reduced when our fighters are ready to accompany us." <sup>13</sup> On May 4, 1943, P–47s flew escort for the first time, over a short distance. Although they apparently reduced attrition, P–47s and Spitfires lacked the range



B-17 Flying Fortresses over Europe. Formation flying, particularly without escort fighters, did not guarantee bombers freedom from enemy air and ground fire.

to protect B–17s on deep penetrations. Under usual procedures, the bombers were escorted across the English Channel by Spitfires and P–38s; then they were taken almost to the German border by P–47s; once they crossed the border they were on their own. After a trip to England in June, Assistant Secretary of War for Air Lovett expressed to General Arnold his strong belief that losses could only be cut if the bombers were afforded escort protection all the way to their targets and back. Acting on Lovett's opinion and what he viewed as a rapidly worsening situation, Arnold directed that a crash program be established to have a long-range fighter ready within six months.

Even when equipped with an auxiliary fuel tank, the P-47 lacked sufficient range for deep penetrations. The Regensburg-Schweinfurt (August) and the

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Schweinfurt (October) raids, in which Americans lost hundreds of crewmen, brought about a crisis. The losses were prohibitive although results against the ball-bearing factories at Schweinfurt were judged good. Based on studies done by his operations analysts, General Arnold thought "that a stoppage, or a marked curtailment, of the production of ball bearings would probably wreck all German industry." In his memoirs, Albert Speer, Hitler's minister of armaments and war production, emphasized the importance of the ball-bearing industry. Had the Schweinfurt attack been followed up, he noted, the result for Germany would have been devastating: "Armaments production would have been crucially weakened after two months and after four months would have been brought completely to a standstill." However, this was contingent on simultaneous attacks



P-51 Mustangs over Europe. Drop tanks made all the difference, providing greater range to these and other types of fighter escorts as they protected long-range bombers against enemy aerial attacks.

on *all* ball-bearing factories, including those in France and Italy, on repeating the attacks "three or four times every two weeks," and on preventing the factories' rebuilding. Speer was undoubtedly correct that the ball-bearing industry was vital. Nevertheless, VIII Bomber Command, in light of the losses it was taking, could not have continued to bomb week after week. In 1943 it did not have long-range escort or the resources—crews and equipment—to do so. Sustaining such an effort proved out of the question. At any rate, in the face of insistent calls to scrap daylight bombing, General Eaker became more certain than ever that the answer was long-range escort all the way to the target rather than a switch to night bombing. During the week of the second Schweinfurt mission, the Eighth Air Force lost 148 planes with crews. As a result, Operation POINTBLANK came to a halt. Deep raids were scrubbed; but on December 13, 1943, Kiel and

Hamburg were visited, and for the first time P–51B Mustang fighters accompanied the bombers. Equipped with auxiliary drop tanks, they performed exceptionally well. By April 1944 the P–51B was considered the best of the long-range escorts. In February during Big Week, and in March 1944, the Mustangs and P–47 Thunderbolts of VIII Fighter Command gained air superiority, assured the success of the bomber offensive and, most important, secured the invasion of the European continent.

Meanwhile, in late 1943 Arnold had become dissatisfied with what he felt was the slow pace of the Eighth Air Force's campaign. Consequently, he relieved Eaker from his command (effective December 22, 1943), sending him to be air commander-in-chief of the newly formed Mediterranean Allied Air Forces. In Washington, Arnold had been under considerable pressure to show results. According to Eaker: "We had to make a showing for General Arnold which would convince the Joint and the Combined Chiefs of Staff that our effort was worth the amount of material and personnel we were using." Eaker noted "this tremendous pressure" that he felt to get out more bombers, day after day:

If we had kept this up day after day we would have had no bombers left. I said to General Arnold that it was going to be my policy to conduct our operations at such a rate that we will always be growing and therefore a more menacing force. I will never operate at such a rate that I will be a diminishing and vanishing force . . . this argument was conducted over a period of several months . . . quite intense, quite bitter. 16

In a personal retrospective written in 1974, Hansell defended Eaker's leadership of the Eighth Air Force by emphasizing that bomber commanders during the war needed all the help they could get while dealing with "attacks from the rear," a euphemism for criticism from higher headquarters in Washington, name-





Changes in top command. In December 1943 Lt. Gen. Carl A. Spaatz assumed leadership of U.S. Strategic Air Forces in Europe while Lt. Gen. Ira C. Eaker became commander of the Mediterranean Allied Air Forces.

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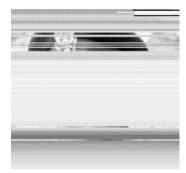
ly from General Arnold. Higher headquarters, noted Hansell,

if it is thousands of miles away in a different environment, can hardly be expected to understand fully the perils and vicissitudes of daily operations. Blistering criticisms and imperious demands from Washington came crackling over the air . . . I do not suggest that incompetence should be shielded or tolerated, but competence itself can be shattered by unreasonable attitudes and demands from above. <sup>17</sup>

As Eaker himself put it, Arnold "had the faculty of leading all subordinates to their highest possible effort; he picked many subordinates for prominent positions when I well knew that he did not particularly care for them, but he judged that they had the ability to do the job required." As Eaker departed his Eighth Air Force command, Spaatz became head of the U.S. Strategic Air Forces in Europe under Eisenhower, who was to become supreme Allied commander for OVERLORD. Air Chief Marshal Sir Arthur Tedder became Eisenhower's deputy and air commander-in-chief for OVERLORD. Maj. Gen. James H. Doolittle came from the Mediterranean to command the Eighth Air Force and Maj. Gen. Nathan F. Twining took over the Fifteenth Air Force in Italy with its additional fifteen heavy bomber groups (originally scheduled for the Eighth) to be used against POINTBLANK targets, thereby complementing bomber operations from the United Kingdom.

In this big switch—the major reorganization of top air commanders during the war—it seems that Arnold and Spaatz agreed that Eaker should be transferred to the Mediterranean Allied command. According to the official explanation, accepted through the years, Spaatz was senior to Eaker, highly regarded by Arnold, had worked harmoniously with Eisenhower, and was all along regarded as the "natural choice" to lead operations in the war's final phase. Further, Eaker was particularly well qualified by his experience in England to head an integrated air command under a British theater commander. *The Army Air Forces in World War II* notes that Eaker wanted to stay in England to command the Eighth





Changes in top command. Maj. Gen. James H. Doolittle took over the Eighth Air Force and Maj. Gen. Nathan F. Twining became head of the Fifteenth Air Force.

under Spaatz and he wrote to Arnold that it was "heartbreaking to leave just before the climax." Others, too, felt that he should stay, including Lt. Gen. Jacob L. Devers, to be deputy to Gen. Sir Henry Maitland Wilson, the Mediterranean theater commander. Also, it was recognized that "Eaker's long experience in England and Doolittle's experience in Northwest Africa and the Mediterranean naturally suggested a reversal of the proposed assignments for the two men." 19

General Marshall wondered whether switching Eaker and Devers from England might make things uncomfortable for Wilson. More to the point, he wondered whether Tedder and Spaatz were being unnecessarily self-serving in their desire to move Eaker. General Arnold had mentioned this transfer to General Eisenhower in a brief conversation in Sicily and Eisenhower had agreed to it, although he told Marshall that Eaker would also be "completely acceptable." Eisenhower felt that it would be a waste to have both Spaatz and Eaker in England.<sup>20</sup> In a message to Marshall on December 25, 1943, he observed that "this assignment for Spaatz leaves me somewhat puzzled both as to the purpose and as to the position of such a command in an American organization, since we always, in each theater, insist upon a single commander."<sup>21</sup>

Arnold badly wanted Eaker transferred. The record leaves no doubt that General Eaker was understandably distressed, if not bitter. He knew that Eisenhower would have been content to have him remain as he had not requested Spaatz. Further, the evidence indicates that Arnold had been dissatisfied with what he felt was the slow pace of the Eighth's campaign, and had repeatedly badgered Eaker to get more bombers into the air and to schedule more missions. Arnold's loyalty to commanders did not rest on a personal basis; he demanded performance.

The turning point occurred during Big Week in February 1944 when Spaatz sent the Eighth and Fifteenth Air Forces against the Reich and Doolittle sent his long-range fighters to escort the bombers striking the German fighter aircraft industry. As a result, German fighter aircraft production suffered a crippling blow; moreover, the Luftwaffe in the air lost more than a third of its single engine fighters and almost a fifth of its fighter pilots. Between Big Week and May 1944, the defeat of the Luftwaffe paved the way for the Normandy invasion. Spaatz made one of the most critical decisions of the European war when he decided to launch Big Week in February. In early 1944 he had become determined, once he obtained long-range escort, to send daylight bombers deep into the Reich. Their primary target would be synthetic oil. He reasoned that the Germans would defend this target and thus provide him the opportunity to destroy the Luftwaffe. The resultant insufficiency of fuel would affect German transport and industry and, at the crucial point, the enemy's ground forces. Spaatz proposed a strategy to ruin Germany's war economy and her ability to contest OVERLORD. However, Eisenhower argued that he should have control over all air power, including Spaatz's and Harris's bombers, and he was backed by Tedder, who wanted a sustained attack against transportation targets, especially railroads.

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Eisenhower endorsed this railway plan, convinced it was necessary to the success of OVERLORD. The supreme commander staked everything, declaring that since he was invested with overall responsibility he could not accept anything less than complete operational control. Should he lose on the issue, he would withdraw from command.

Arnold had concluded that it would be unwise to oppose Eisenhower. Thus, although he encouraged Spaatz to press his view, Arnold himself took the position that it was a matter for Eisenhower to decide. In March, Portal worked out a compromise whereby Tedder would develop the overall air plan, advised by Spaatz and Harris. Air Marshal Sir Trafford Leigh-Mallory, who commanded the Allied Expeditionary Air Force, would formulate the tactical plan, under Tedder's supervision. Additional requests from Eisenhower for more bombers than provided for in the original plans would have to be approved by the Combined Chiefs of Staff.

The way apparently clear, in late March, Eisenhower directed that heavy bombers would be used against the railway system in northern France, Belgium, and western Germany. Eisenhower and Tedder also decided to use interdiction strikes before D-Day and to permit Spaatz to attack synthetic oil. The compromise would prove to be crucial. Although Churchill had reservations about the railway plan because he was concerned that French civilians might be killed and injured, Roosevelt was not prepared to impose any restrictions on bombing. Churchill acquiesced. Before D-Day, interdiction strikes were flown against bridges, viaducts, and rolling stock. Rail traffic was much reduced and key bridges were wrecked. French civilian casualties were lower than anticipated.

In May, the Eighth Air Force pounded synthetic oil plants in Germany, while the Fifteenth Air Force struck oil refineries at Ploesti and in Austria, Yugoslavia, and Hungary. The Luftwaffe, desperately defending the targets, took severe losses and on D-Day would be in no position effectively to contest the invasion. Hansell later recalled: "It was the soldier who paid the price on the beaches of Normandy. Air power made a tremendous contribution on that day, but its role will probably continue to diminish in popular recognition." By August, the Germans were critically hampered by the lack of fuel. Much later, Albert Speer observed that the campaign against oil had proved decisive.

# IV

# THE TWENTIETH AGAINST JAPAN

The creation of the Twentieth Air Force in April 1944 was a major turning point in the war against Japan, enabling General Arnold to concentrate the power of his very long range force against the Japanese home islands without losing control to theater commanders. The Boeing B–29 Superfortress, the bulwark of the Twentieth, had suffered major growing pains; however, its development was important in several ways. First, the B–29 represented a significant technological advance in bomber evolution. Second, by dropping the atomic bombs the B–29 made the strategic bombing campaign crucial to forcing Japan's surrender. And finally, the Twentieth Air Force in its organization and B–29 operations played a major role in the postwar Army Air Forces (AAF) as a model for the Strategic Air Command—structured as a specified command directly under the Joint Chiefs of Staff—and in the struggle for independence.

The B-29 program, a \$3 billion investment, has been called the greatest gamble of the war, greater even than the \$2 billion Manhattan project that produced the atomic bombs. It should be noted that support for the B-29 campaign evolved at the apex of American governmental leadership. In December 1940 an outraged President Roosevelt expressed a desire to see Japan bombed after its Imperial Army's rampage through East Asia. Following the evolution of the B-17 in the 1930s, the development of the B-29 began before World War II and continued as the conflict wore on, under the Very Long Range (VLR) project. Arnold, as Army Air Corps chief, began the project in November 1939, following through on recommendations of the Kilner Board, two months after Germany invaded Poland. In October 1940 he wrote to the assistant secretary of war that the B-29 was the only weapon with which the AAF "could hope to exert pressure against Japan without long and costly preliminary operations." Initially, the Superfortress was to be used in Europe, but by late 1943 both the AAF and the Joint Chiefs of Staff (JCS) had decided that carrying the war to the Japanese home islands was more compelling, so they deployed the B-29 to the Pacific.

Unfortunately, the B–29 in 1943 and 1944 would encounter major problems in engineering, testing, and manufacturing sufficiently severe that some in the AAF doubted that it would succeed. Arnold, responding to his superiors, including Roosevelt, skirted the testing cycle and pushed the aircraft into production. A great advance over the B–17 and the B–24, the B–29 featured 2,200-horsepower Wright Cyclone R-3350 turbo-supercharged engines, pressurized crew compartments, and an intricate fire control system. Before the Japanese attack on Pearl Harbor, Arnold had planned to purchase 250 B–29s, but thereafter ordered 500, increasing to a buy of 1,600 in February 1942.

Later that year, tests indicated the possibility of engine fires, and in February 1943 disaster struck when they broke out in a second prototype aircraft. It crashed, smashing into a meatpacking plant three miles from the end of the Boeing runway. Its test pilot, Edmund T. Allen, his crew of ten, nineteen people in the building, and one fireman were killed. Investigations ordered by Arnold and Senator Harry S. Truman pinpointed defective engines and unsatisfactory quality control. As a result, Arnold established the B–29 Special Project, headed by Brig. Gen. Kenneth B. Wolfe, to supervise testing, training, and manufacturing. It was a fact that the B–29s were not combat operational when sent in April 1944 to the China-Burma-India theater of operations. During one week in that month, the worst in the history of B–29 overseas deployment, five aircraft crashed near Karachi because of overheated engines. The problem was subsequently solved by an intense engine-cooling project designed by engineers at Wright Field and the National Advisory Committee for Aeronautics.

Meanwhile, in January 1943 at the Casablanca Conference, Roosevelt suggested deploying B–29s to China, within striking range of the Japanese home islands. In August 1943 at the Quadrant Conference in Quebec, Arnold presented his "Air Plan for the Defeat of Japan," which called for the deployment of B–29s to central China to strike Japan's major industrial centers. Although the Allies' first objective was the defeat of Nazi Germany, the U.S. and Britain pledged in 1943 "to maintain and extend unremitting pressure against Japan with the purpose of continually reducing her military power and attaining positions



April 4, 1944, the date on which the Twentieth Air Force was activated. Commanded by Lt. Gen. Henry H. Arnold in Washington, D.C., the Twentieth organized the B-29 bombing campaign against the Japanese home islands.

from which her ultimate surrender can be forced." In the summer of 1943, Lt. Gen. George C. Kenney, commanding the Allied Air Forces and the U.S. Fifth Air Force under Gen. Douglas MacArthur in the Southwest Pacific theater, asked Arnold to deploy the B–29s to Australia, but Arnold was determined to employ the "Superforts" against the home islands. Kenney, it should be noted, took the news badly, stating that the best the B–29s in the Marianas could mount against Japan would be "nuisance raids."

Roosevelt chafed as the deployment of B-29s to China was delayed. In October 1943 he wrote to Marshall:

I am still pretty thoroughly disgusted with the China-India matter. The last straw was the report from Arnold that he could not get the B–29s operating out of China until March or April next year. Everything seems to go wrong. But the worst thing is that we are falling down in our promises every single time. We have not fulfilled one of them yet.<sup>2</sup>

B–29 operations out of China as part of Operation MATTERHORN beginning in June 1944, logistically never made much sense, but they went forward as the president insisted that they would enable the United States to keep China in the war by shoring up the morale of its people.

In November 1943 Arnold had established XX Bomber Command to conduct B–29 training in the United States. By April 1944 eight B–29 airfields were



The B-29 Superfortress. The aircraft, available for deployment in 1944, was the largest and most advanced bomber of World War II. The "Superfort" had a 141-foot wing span and a combat radius of 3,259 miles. It provided the very long range that the Army Air Corps realized in the late 1930s would be required over the vast Pacific.

available in India and China. Brig. Gen. Kenneth B. Wolfe led XX Bomber Command to India under MATTERHORN. His first strike against the home islands occurred in mid-June 1944, but his operation suffered from maintenance and logistical problems. As a result, Arnold relieved Wolfe in favor of Maj. Gen. Curtis E. LeMay, who had pioneered bomber tactics with the 305th Bombardment Group in England. "With all due respect to Wolfe," Arnold stated, "LeMay's operations make Wolfe's very amateurish." LeMay improved XX Bomber Command's record, but the operation had trouble getting supplies, which had to "fly the Hump" over the Himalayas, the world's highest mountain range. The distance from China to targets in Japan proved a major obstacle as well. Tokyo was more than 2,000 miles from B–29 staging bases in China, beyond the range of the bombers.

Arnold never expected to deal Japan a crushing blow from China. In October 1944 he named Brig. Gen. Haywood S. Hansell, Jr., commander of XXI Bomber Command, a subunit of the Twentieth activated in August 1944, which was being set up in the newly captured Mariana Islands, 1,500 miles from Tokyo. The Marianas not only put most of Japan within B–29 striking range, they also made possible the supply and sustenance of hundreds of the aircraft at once. The island of Iwo Jima subsequently became a search and rescue site. On November 24, 1944, Hansell launched his first strike against the home islands.

The B–29 campaign against Japan raised the crucial question of operational control. Given the mission of long-range strikes, who would control the B–29 force? Arnold recognized the issue as paramount to the success of the Pacific conflict and critical to the future of the air arm. Consequently, in September 1943, he decided that he would have to command it himself. In his memoir he stated that he reached this determination reluctantly, but, in fact, he wanted to employ the B–29s in a strategic role; to do so he had to exercise command over the force so as not be tied down to any specific theater.

A similar organization had been structured with the formation of the U.S. Strategic Air Forces (USSTAF) in Europe, headed by Gen. Carl A. Spaatz. It included Eighth Air Force operations from the United Kingdom and Fifteenth Air Force long-range bombing operations from Italy. The Combined Chiefs of Staff (CCS) exercised control over USSTAF through their executive agent, Air Chief Marshal Charles A. Portal, RAF Air Staff chief. The British wanted the Twentieth under the control of the CCS but the Joint Chiefs considered the Pacific long-range strategic bombing campaign an American responsibility. Thus, upon Arnold's insistence that he control the B–29 VLR bomber force, which would be operating out of the Marianas, the JCS approved the arrangement and in April 1944 the Twentieth Air Force was activated.

Arnold was authorized by the War Department "to implement and execute major decisions of the Joint Chiefs of Staff relative to deployment and missions, including objectives of the Twentieth Air Force." Logistics support for the Twentieth was assigned to the theater commander. As delineated by the Joint

Chiefs, the mission of the Twentieth was "to achieve the earliest possible progressive dislocation of the Japanese military, industrial, and economic systems and to undermine the morale of the Japanese people to a point where their capacity and will to wage war was decisively weakened." Consequently, the Twentieth Air Force became what one might term a global air force, not bound to any theater of operations or any theater commander. As one air historian noted, this allowed the AAF "to go over the heads" of the Pacific theater commanders—MacArthur, Nimitz, and Stilwell. LeMay, the B–29 commander, put it this way:

Arnold did this so we'd have a command in the Pacific where we were free to fly over anybody's theater, to do an overall job. Naturally, Admiral Nimitz wanted everything he could get his hands on; General MacArthur wanted everything he could his hands on; and General Stilwell wasn't behind-hand in wanting everything as well. And we were flying over all three of their theaters. We simply had to have central coordination on this deal.<sup>5</sup>

The precise circumstances in which the Joint Chiefs approved this "radical" command arrangement remain unclear. According to Hansell, General Marshall and Admiral King were persuaded that the B–29 campaign required unity of command from Washington, free from control of theater commanders. Marshall accepted Arnold's position immediately, but why King did so is not at all clear. This unprecedented command arrangement had the effect of placing the AAF on an equal basis with the Army and the Navy in the Pacific. The Twentieth had become an independent entity. Hansell described the formation of the Twentieth as "one of the most important events in the history of the United States Air Force." The new organization reflected Arnold's strategic concept. The great range of the air arm made possible the striking of an enemy's industrial and economic power. Arnold wanted to demonstrate the independent power of the air arm and the Joint Chiefs were providing the AAF the opportunity to do just that. In addition to naming Arnold to head the Twentieth Air Force, the Joint Chiefs also directed theater commanders to

coordinate B–29 operations with other air operations in their theaters, to construct and defend B–29 bases, and to provide logistical support and common administrative control of B–29 forces . . . Should strategic or tactical emergencies arise requiring the use of B–29 forces for purposes other than the missions assigned to them by the Joint Chiefs, theater commanders are authorized to use the B–29 forces, immediately informing the Joint Chiefs of such action. $^6$ 

As noted, the B–29 suffered severe growing pains, forcing Arnold to restructure its production process. Likewise, in the theater, operations against Japan from the Marianas got off to a slow start. Ultimately, the change in tactics to low-level B–29 strikes—one of the most significant military decisions of the war—signaled the beginning of the end for Japan. Arnold was in a race against time. Hansell had arrived in the Marianas in late 1944, but by January 1945 he





The B-24 and the B-17. They had been the heaviest and longest-range bombers, carrying the burden in the Pacific theater until the arrival of the B-29.

had accomplished little because of maintenance and equipment problems and high jet stream winds over the Japanese home islands. The round trip from the Marianas to Japan consumed an enormous amount of fuel. And at altitudes of up to 35,000 feet, jet stream winds blew the B–29s off course. Fundamentally, however, Hansell had long been committed to high-altitude precision bombing and he resisted the call for incendiary attacks from Arnold and Maj. Gen. Lauris Norstad, chief of staff of the Twentieth Air Force under Arnold in Washington. By January 1945 Arnold had run out of patience. Meanwhile, the Japanese, concerned about the potential impact of the Superfortress, in the summer of 1943 attempted to learn more about it. Although they evolved a substantial technical analysis of the B–29, and estimated that a strategic campaign against their home islands could not begin before the summer of 1944, the Japanese never developed a sustained air defense.

In September 1944 Arnold had been quite specific in his marching orders to Hansell, making clear the enormous importance that he placed on B–29 operations—"the Battle of Japan"—and on the role of XXI Bomber Command in achieving the "earliest possible defeat of Japan." By the end of December, Arnold showed his famous impatience. Hansell's forces failed to show early results. Arnold informed his commander that he was watching him "from day to day with the greatest anticipation." Arnold was blunt as he reminded Hansell: "We have a big obligation to meet . . . we must in fact destroy our targets and then we must show the results so the public can judge for itself . . . the effectiveness of our operations." This was vintage Arnold, eager to show Americans the results that the Army Air Forces were achieving with the resources that the taxpayers were providing.

Hansell's major problem was his insistence on running high-altitude daylight precision operations. Norstad, dedicated to incendiary missions, and Maj. Gen. Laurence S. Kuter, of Arnold's staff, continued to urge Hansell to get his missions against Japanese urban areas under way. They cited recommendations

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B-29s on Guam. After Admiral Nimitz's Central Pacific forces captured the Mariana Islands in August 1944, the AAF built five major airfields on Saipan, Tinian, and Guam. The bombers were first deployed to China and India. Bases in the Marianas brought them hundreds of miles closer to Japan's home islands.

by the Committee of Operations Analysts (COA), formed by Arnold in 1942. The committee, made up of military and civilian specialists, concentrated on target selection. Originally, it supported the European bomber offensive. In the spring of 1943, the COA began an intensive study of potential Japanese targets, in support of the coming B–29 offensive. Hansell, however, remained reluctant to undertake an incendiary campaign, unshakable in his commitment to the precision bombing of industrial targets. One veteran of B–29 operations described Hansell's commitment as a desire to conduct a "civilized" campaign, without excessive civilian casualties.

To be sure, Hansell encountered severe maintenance and weather problems that affected his fledgling force, and he described these to Arnold. A press release by Hansell in late December 1944 convinced Arnold to make a change in commanders. The release proclaimed that B-29 operations were "far from the standards we are seeking . . . We are still in our early experimental stages. We have much to learn and many operational and other technical problems to solve." The AAF commander, however, was not interested in Hansell's problems. He kept



B-29s dropping incendiary bombs over Japan. The incendiary campaign devastated Japan's warmaking infrastructure and industrial output, much of which was located within urban areas.

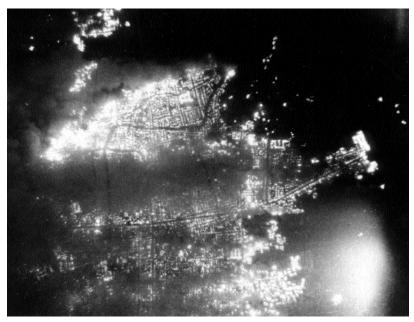
pounding him to increase bomb tonnage and sorties. When Hansell failed to produce, Arnold turned to Le May. Hansell later wrote that Arnold failed to understand what XXI Bomber Command had accomplished. His command's performance had been quite good, he maintained, but this was not apparent until after the war. Actually, Hansell himself recognized the strong case that existed for the incendiary bombing of Japan. He noted that appropriate target materials on Japan were not available and that results from his daylight precision campaign had been disappointing. Incendiary attacks could be run free from severe weather problems. Moreover, Japanese industrial targets were located in sprawling urban areas that could best be destroyed by area bombing, Japanese cities being exceedingly vulnerable to incendiary strikes. In retrospect, Hansell conceded that "there is no doubt that the incendiary strategy was decisively effective." <sup>10</sup>

Thus, having bet everything on the B–29 campaign, Arnold in January relieved Hansell and called on the one man who had consistently demonstrated leadership and imagination in the strategic bombing business—Curtis E. LeMay. This replacement was one of the key decisions of the Pacific war. As Norstad told it, Arnold was increasingly frustrated with Hansell, but he hesitated to replace him. At Norstad's prodding, Arnold came clean and indicated that he wanted LeMay. When Norstad suggested to Arnold that he personally fly to the Pacific and break the news to his commander, Arnold refused and directed Norstad to do

it. Norstad flew to Guam and summoned LeMay from India to meet with him and Hansell. It was not a pleasant gathering. Hansell was crushed. <sup>11</sup> LeMay knew that Hansell was in trouble and that Arnold was dissatisfied with B–29 operations to that point. <sup>12</sup>

In his memoir Hansell made the case that, if given time, his high-altitude precision bombing campaign could have succeeded. However, time was not a commodity that Arnold possessed in abundance. As Hansell admitted, Arnold was under enormous scrutiny in Washington to produce quick and significant improvement. President Roosevelt had emphasized to General Marshall that he expected a payoff from the enormous investment in the B–29 program. The clock was ticking and Marshall had made it clear that Roosevelt expected results, the kind that would preclude an invasion of Japan, fraught with the potential for enormous casualties. Before his death Roosevelt grew increasingly committed to an intensive bombing campaign against Japan. In February 1945 he had mentioned to Soviet Premier Joseph Stalin his belief that Japan and its army had to be destroyed to save lives.

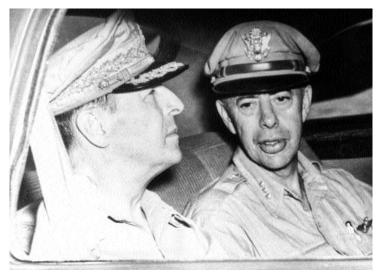
According to LeMay, there were usually only four or five "good" bombing days per month over Japan. He had been warned by Norstad that if he did not succeed in the bombing campaign, an invasion would be required. LeMay realized that he could suffer the same fate as Hansell:



Japanese city under B-29 incendiary attack. The AAF replaced high-altitude daytime precision bombing with low-altitude nighttime area bombing.

General Arnold needed results. Larry Norstad had made that very plain. In effect he had said: "You go ahead and get results with the B–29. If you don't get results, you'll be fired. If you don't get results, also, there'll never be any Strategic Air Forces of the Pacific. If you don't get results, it'll mean eventually a mass amphibious invasion of Japan, to cost probably half a million more American lives." <sup>13</sup>

After talking to Norstad, his bomb wing commanders, and his staff, a number of whom were opposed to a change in tactics, LeMay made the decision in March that turned the bombing campaign around. The B–29s would go in at low



Gen. Douglas MacArthur, Southwest Pacific theater commander, and Lt. Gen. George C. Kenney, Allied Air Forces and U.S. Fifth Air Force commander. Kenney, after holding the line in Asia against Japan as the United States and the Allies tackled Germany and the European theater first, wanted the new B–29s deployed to Australia.

levels, between 5,000 and 9,000 feet. Norstad had given LeMay the impression that, as far as tactics were concerned, Arnold was for anything that would hasten the end of the war. On March 9–10, 1945, a low-level incendiary attack on Tokyo resulted in a conflagration—the most destructive bombing raid of the entire war—signaling the start of the sustained burning out of Japan's major urban areas. The March attack on Tokyo was the single greatest disaster suffered by any nation in the history of war. The B–29s destroyed sixteen square miles of the city, demolishing one-fourth of its structures. More people were killed and injured in the Tokyo raid than in the atomic bombings of Hiroshima or Nagasaki. More than one million people were left homeless.

The B–29 campaign amounted to the culmination of the war for Arnold. He had bet everything on the Superfortress, driving it through testing and production. Were it not for the demands of global war, the B–29 assembly line would surely have been shut down while the aircraft's major engine flaws were corrected. Those flaws, however, were addressed after the plane had been deployed to the operational theater. Arnold cut corners in the acquisition process in order to make the B–29 operational as soon as possible. He was convinced, as General Kenney put it, "that this was the plane with which we would win the war." <sup>14</sup>

Hap Arnold during the war never lost sight of the importance of the independent strategic bombing campaign to the future of the air forces and goal of an



Maj. Gen. Curtis E. LeMay and Brig. Gen. Haywood S. Hansell, Jr. LeMay took over the leadership of XXI Bomber Command from Hansell on January 19, 1945.

independent United States Air Force. He had long believed that such an operation could bring a modern, industrialized enemy nation to its knees without a land invasion. The conflict with Japan in the Pacific offered a showcase for Arnold and the Army Air Forces. Sensing in June 1945 that Japan might be on the ropes, he had flown out to the Pacific to get LeMay's personal assessment. LeMay predicted that, because of the bombing and naval blockade, the Japanese would not hold out any longer than October. Arnold immediately directed LeMay to fly to Washington to present his assessment to the Joint Chiefs of Staff. Having been delayed and arriving one day after President Truman ordered the JCS to plan for a two-stage invasion of Japan in November 1945 (OLYMPIC) and March 1946 (CORONET), LeMay briefed General Marshall and the Joint Chiefs. According to LeMay, Marshall dozed through the briefing and the chiefs

"were not at all interested in what a two-star general had to say." <sup>15</sup> In fact, Arnold was aware that LeMay's estimate had been emphasized by a preliminary report of the United States Strategic Bombing Survey, based on the effects of the strategic bombing of Germany, that an invasion of Japan would not be required. However, Marshall and Gen. Douglas MacArthur, Southwest Pacific theater commander, supported the planned invasion.

The question of the invasion and its timing came to a head in the summer of 1945. Aware that Truman had scheduled an all-important meeting on it with the Joint Chiefs in mid-June, Arnold, as mentioned, had flown to the Pacific for an on-the-spot evaluation of the bombing campaign. He tapped Eaker to attend the president's meeting. Arnold's strategy was to have Eaker and the AAF go along with the planned Kyushu landing while simultaneously attempting to knock out Japan with the bombing campaign. Arnold recognized that the Joint Chiefs regarded the bombing campaign of the home islands as a prelude to the invasion. Consequently, Truman's decision on June 18, 1945, to go ahead with planning for the assault on Kyushu in November 1945 led to a formal JCS decision to intensify the air bombardment and blockade, along with the assault, in order to set the stage for "the decisive invasion of the industrial heart of Japan through the Tokyo Plain." <sup>16</sup>

The Joint Chiefs were hoping to create the conditions through the air bombardment and blockade that would make the ultimate invasion of the Tokyo Plain "acceptable and feasible." By November the Japanese situation was expected to be "critical." Although Truman had approved the Kyushu assault by November 1 and the invasion of the Tokyo Plain by March 1, 1946, the JCS left open the possibility that bombardment and blockade might in fact induce Japan to surrender. They noted that between November and March more bomb tonnage would be dropped on Japan than had been delivered against Germany during the entire European war. All of this planning of course took place before the dropping of the atomic bombs in August 1945. As it was, the B–29s dropped 147,000 of 160,800 tons of bombs—more than ninety percent of the total—dropped by all aircraft on the Japanese home islands. Ninety percent of total U.S. bomb tonnage fell on Japan during the last five months of the war.<sup>17</sup>

To Hansell, the invasion should not have been seen as the coup de grace. The atomic bomb, he emphasized, was necessary to convince Japan to surrender and to "convince the American Army that invasion was not needed." According to Hansell, Generals Arnold, Spaatz, and LeMay all opposed dropping the atomic bombs "if the invasion of Japan was postponed or abandoned." However, if the strategy held, then they approved of the use of the bombs to obviate the necessity of an invasion with its great loss of American lives. 18

Arnold, of course, in the summer of 1945 was aware of the development and readiness of the atomic bomb and was informed by President Truman at Potsdam in July that it had been successfully tested. Arnold's view at Potsdam was that the B–29 conventional bombing offensive was working and that the use

of the atomic bomb would not be necessary. He had sent General Spaatz to Guam as head the U.S. Strategic Air Forces in the Pacific to seal the collapse of Japan before an invasion. The United States Strategic Bombing Survey published the following conclusion:

Based on detailed investigation of all the facts, and supported by the testimony of surviving Japanese leaders involved, it is the Survey's opinion that certainly prior to December 31, 1945, and in all probability prior to November 1, 1945, Japan would have surrendered even if the atomic bombs had not been dropped, even if Russia had not entered the war, and even if no invasion had been planned or contemplated.<sup>19</sup>

As it turned out, however, and as has been mentioned, the formation of the Twentieth Air Force and its contribution to the defeat of Japan were of crucial importance to the Army air arm as it moved toward independence. Moreover, the Twentieth laid the foundation for the postwar creation of the Strategic Air Command as a specified command reporting directly to the Joint Chiefs of Staff.

With the war in Europe over and plans being made for the transfer of air forces to the Pacific and the final great assault on the Japanese home islands, Arnold once again decided to change commanders. This time it was LeMay who felt the heat; his XXI Bomber Command would be deactivated, General Spaatz would come in to command the U.S. Strategic Air Forces in the Pacific, and Lt. Gen. Nathan F. Twining would command the Twentieth Air Force. Lt. Gen. James H. Doolittle would head the Eighth Air Force, stationed in Okinawa. LeMay would serve as Spaatz's chief of staff while Lt. Gen. Barney Giles would be Spaatz's deputy. Arnold, of course, had great confidence in Spaatz, and needed the heft of a four-star senior airman in the Pacific, one with an impressive record who had commanded the U.S. Strategic Air Forces in Europe. MacArthur was less than pleased to see another four-star in the theater, complaining that Arnold was "muddying the waters."

# THE AAF AND THE ATOMIC BOMB

It may be said that, for the most part, air power in World War II played a complementary rather than an independent role. An exception was the Twentieth Air Force, under the command of General Arnold in Washington, as it carried out the B–29 strategic bombing offensive against the Japanese home islands. Once air bases in the Marianas were secured, the Twentieth's long-range bombing operations ravaged Japan's urban centers, collapsed its home morale, and paved the way for the its surrender without the necessity of an invasion of the home islands. This brings up the question of the role of the atomic bomb in Japan's defeat. Although it was certainly central to the surrender, the power of the B–29 conventional bombing offensive during the spring and summer of 1945, along with the blockade of Japan's waters, had already sealed the enemy's fate.

It has always seemed curious to me that in the enormous amount of writing and commentary on the subject of the atomic bomb and the end of the war in the Pacific, relatively little has been written about the views of Army Air Forces (AAF) leaders, those commanders who were operationally responsible for dropping the bombs on Hiroshima and Nagasaki. Two notable exceptions are Conrad C. Crane, *Bombs, Cities, and Civilians: American Airpower Strategy in World War II*, and Ronald Schaffer, *Wings of Judgment: American Bombing in World War II*. Crane's book, published in 1993, was especially welcome, as it is a generally objective work describing the complexities faced by AAF commanders in the European and Pacific theaters, especially relating to the difficulties in precision bombing. The way in which the Pacific war ended became a large part of the postwar debate in the United States on defense reorganization. In late April 1945 Maj. Gen. Curtis E. LeMay informed General Arnold that Japan could be bombed out of the war by the end of October 1945 through conventional bombing. "For the first time," LeMay emphasized,

strategic air bombardment faces a situation in which its strength is proportionate to the magnitude of its task. I feel that the destruction of Japan's ability to wage war lies within the capabilities of this command, provided its maximum ability is exerted unstintingly during the next six months, which is considered to be the critical period.<sup>2</sup>

The end of the war in Europe in May 1945 released the air forces for the Pacific. Some AAF and Navy leaders, preeminently Generals LeMay and Arnold and Admirals King and Leahy, believed that Japan could be forced to surrender without an invasion because of continued blockade and bombardment. Initially, however, they did not openly and directly challenge in high policy councils the prevailing Army opinion that preparing for—and, if necessary, undertaking—an invasion of Japan were essential.

President Roosevelt and General Marshall were strong supporters of the B–29 bombing offensive against the Japanese home islands. Roosevelt, in a major national policy shift during the interwar period, became the first American president to not only support, but to also advocate, strategic bombing. On more than one occasion he had warned publicly that the United States would unleash heavy bombing campaigns against the Axis powers. In early 1943 he declared, "we will hit them from the air heavily and relentlessly . . . the Nazis and Fascists have asked for it and they are going to get it." Actually, FDR, even before Pearl Harbor and throughout the war, had always been a strong and outspoken advocate of strategic bombing. At press conferences, he described "devastating blows" and stated, "We are hitting military targets and blowing them to bits." Moreover, Roosevelt had a surprisingly detailed grasp of military operations and he remained sensitive to attrition in the strategic bombing campaigns, once emphasizing in a message to Congress:

We must remember that that in any great air attack the British and Americans lose a fairly high proportion of planes and that these losses must be made up quickly so that the weight of the bombing shall not decrease . . . a high rate of increase must be maintained . . . and that means constant stepping-up of our production.<sup>5</sup>

This was perfectly consistent with his calls, well before America's entry into the war, for industry to gear up and produce enormous numbers of heavy bombers. During the war, FDR consistently implored Marshall to deliver hammer blows against Japan. Marshall, in turn, kept up the pressure on Arnold. FDR was gravely concerned over mounting American casualties and impatient for an end to the Pacific war. So was President Truman. Here there existed continuity between the two presidents.

In mid-June 1945 Truman directed Adm. William Leahy to convene the Joint Chiefs of Staff (JCS). The JCS was to provide the president with estimates of the time required for and the losses in killed and wounded likely during an invasion of Japan proper. According to Leahy, Truman desired estimates

of the time and the losses that will result from an effort to defeat Japan by isolation, blockade, and bombardment by sea and air forces; it is his intention to make his decisions on the campaign with the purpose of economizing to the maximum extent possible in the loss of American lives; and economy in the use of time and in money cost is comparatively unimportant.<sup>6</sup>

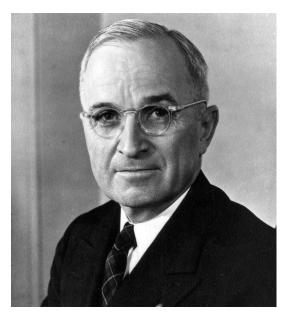
Truman had also received information that between 6,000 and 8,000 Kamikaze planes were in Japanese hands to oppose any U.S. landing on Kyushu. Moreover, MAGIC intercepts of enemy diplomatic traffic in the spring and summer of 1945 indicated that Japan had no intention of surrendering.

Meanwhile, in the spring of 1945 General MacArthur had informed General Marshall that the only means of defeating Japan was by an invasion of the Tokyo (Kanto) Plain, an opinion also held by Marshall and the Army General

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Staff. In late May, shortly after the surrender of Germany, the Joint Chiefs of Staff, via a formal directive, informed MacArthur, Arnold, and Nimitz, that they should plan for an invasion of Kyushu (Operation OLYMPIC) with a target date of November 1, 1945, to intensify the blockade and aerial bombardment of Japan, to contain and destroy major enemy forces, and to support further advances for the purpose of establishing conditions favorable to the decisive invasion of the industrial heart of Japan.

President Truman, who was determined to avoid a repeat of the Okinawa campaign with its high numbers of Americans killed and wounded, called a meeting on June 18, 1945, with the Joint Chiefs. Marshall presented the case for invasion, noting that air power alone had failed to knock Germany out of the war. Eaker, sitting in for Arnold, who was in the Pacific theater, stated the official



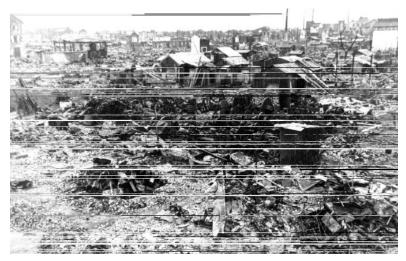
President Harry S. Truman.

AAF view that an invasion of Kyushu would provide a launching base for aircraft sent against Honshu. The Army Air Forces supported invasion plans Operation OLYMPIC and Operation CORONET (the March 1946 invasion of Honshu) yet it was certain that continued bombing and blockade would make any incursion unnecessary. Truman, who gave more weight to Marshall's view than anyone else's, on June 18 directed that plans go forward for the invasion of Kyushu.<sup>7</sup>

The question of an invasion presented the Army Air Forces with a dilemma. Although Arnold and LeMay were convinced that a Japanese surrender could

be forced by the end of October 1945 without an invasion, they did not want to oppose Marshall openly; the AAF owed him a great deal because of his support for air independence. General Eaker emphasized to me that no one in the AAF's top leadership believed that an invasion would be necessary. Arnold thought it best to go along with Marshall while pressing for the bombing offensive.<sup>8</sup>

Shortly before the Potsdam Conference in mid-July, the Joint Chiefs reaffirmed their belief that the only way to force the surrender of Japan was by an invasion of the main home islands. Before the scheduled Kyushu landing on November 1, the Allies would continue their blockade and bombardment. Should Japan fail to surrender following the landing, a massive, "decisive" invasion "of



Aftermath of a B-29 incendiary raid in Tokyo's Ginza district.

the industrial heart of Japan through the Tokyo Plain" would take place in March 1946. The Joint Chiefs, planning for flexibility, noted: "In the period prior to the planned invasion of the Tokyo Plain, every effort will be made to exploit the blockade and bombardment of Japan." Moreover, in the event that the planned attack on the Tokyo Plain was not at the time considered feasible, the blockade and bombardment could be extended and intensified.

Gen. Carl A. Spaatz, who arrived on the island of Guam in July 1945 to command the U.S. Strategic Air Forces in the Pacific, noted later that B–29 conventional bombing, if continued by the AAF, would have forced Japan to surrender "within a month or two from the time that it did surrender." Spaatz also noted that Arnold "used this argument on the Joint Chiefs of Staff, that is, to bomb without the use of the atomic bomb." Eaker stated that in a meeting with Truman and the Joint Chiefs, no date specified, when he was representing

#### THE AAF AND THE ATOMIC BOMB

Arnold, he informed the president of Arnold's position that although he was not opposed to dropping the atomic bomb, he did not believe doing so was necessary to end the war. The AAF view, Eaker stated, was that the atomic bomb might hasten the end of the war, but that a continuation of the conventional B-29 onslaught would also end the war, although perhaps not as quickly.<sup>11</sup> In fact, at Potsdam, after the atomic bomb had been successfully demonstrated in the New Mexico desert, Arnold told Truman that it was not necessary to drop the atomic bomb to end the war. Margaret Truman, in her book on her father, wrote that at Potsdam Arnold changed his mind and opposed dropping the bomb. 12 This is incorrect, since certainly by June 1945, after being briefed by LeMay, Arnold was convinced that Japan could be forced to surrender by November. Arnold was concerned that the revolutionary new weapon would detract from what the conventional B-29 campaign had accomplished. David McCullough, Truman's biographer, wrote that the Joint Chiefs of Staff at Potsdam agreed that Truman should approve the use of the atomic bomb, noting that there was "consensus at Potsdam among Byrnes, Stimson, Leahy, Marshall, and Arnold that the atomic bomb should be employed."13 Arnold, however, had not joined this consensus; although he did not flat out oppose dropping the bomb, he voiced his opinion, based on LeMay's assessment in June, that it was not necessary.

The subsequent long-running controversy over the number of casualties that might have been expected in an invasion of the home islands tended to obfuscate the major point that Truman wanted to end the war quickly with the least loss of American lives, surely what Roosevelt had wanted and what the American public desired. When he called the June 18, 1945, meeting, Truman made clear that his major concern was the number of casualties that an invasion might entail. He did not want "an Okinawa from one end of Japan to the other." The president's point was well taken. Americans took 50,000 casualties at Okinawa, including 12,000 killed, in the costliest battle of the Pacific war.

In connection with the atomic bombings, AAF leaders who prosecuted the air war did not, for the most part, concern themselves with ethics and morality. General LeMay noted:

I do not beam and gloat where human casualties are concerned . . . No matter how you slice it, you're going to kill an awful lot of civilians—thousands and thousands. But if you don't destroy the Japanese industry, you're going to have to invade Japan. And how many Americans will be killed in an invasion of Japan? We just weren't bothered about the morality of the question. 15

In a total war, the United States and Britain pursued long-range strategic bombing to win it and save American and British lives. This, undoubtedly, was what the vast majority of the American people wanted. As a teenager at the time, growing up in a blue-collar neighborhood of Springfield, Massachusetts, where gold stars were on display in the windows of increasing numbers of homes, I became conscious of intense and unremitting hatred of the Japanese military and

its acts of barbarism. The Bataan death march and the "rape of Nanking" were well known and the thirst for revenge was palpable.

The leadership of the AAF could, in fact, be seen as a microcosm of the American public. Air leaders were well aware of enemy atrocities, especially the execution of captured flyers who had bombed Japan in 1942 with Jimmy Doolittle, and the bacteriological experiments on Allied prisoners, cruelly used as guinea pigs. Decades after the end of the war, documentation discovered in China, Japan, and the United States brought to light atrocities perpetrated by Japan's infamous Unit 731 against Chinese prisoners. Japanese military doctors carried out biological warfare experiments on them, or dissected and even cremated many while they were alive, or injected others with bacteria that cause botulism. Imperial, militarist Japan from 1931 to 1945 conducted a holocaust in east Asia that killed approximately fifteen million people, the great majority of them civilians. Almost half died from brutality and forced-labor mistreatment. General Eaker admitted: "I never felt that the moral issue in bombing deterred the leaders of the AAF. A military man has to be trained and inured to do the job. Otherwise you would never win a war. I always felt that a skilled workman was a high-priority target. The business of sentiment never enters into it at all for a soldier." <sup>16</sup> General Spaatz admitted that he had no difficulty ordering the dropping of the atomic bomb:

That was purely a political decision, not a military decision. The military man carries out the orders of his political bosses. So that doesn't bother me at all . . . We didn't hear any complaints from the American people about mass bombing of Japan; as a matter of fact, I think they felt the more we did the better. That was our feeling toward the Japanese at that time.<sup>17</sup>

Indeed, protests in the United States against strategic bombing during the war were rare, even among clergy. The prevailing view in the United States, according to Spaatz, was that the Nazis and the Japanese had, as President Roosevelt said, "asked for it." There was fury in the American people. That fact is now mostly forgotten and frequently absent from today's debate. 18

Philosophy professor A. C. Grayling claims that the Allied strategic bombing of cities during World War II was a "war crime," that the Allies recognized in late 1944 that Japan was finished. These accusations fail to consider that the Japanese government had no intention of surrendering in late 1944 and early 1945, that it controlled vast territories and armies and harbored hundreds of thousands of prisoners. Grayling indicts Britain and the United States, asserting that they had a clear choice between area bombing and "precision" bombing and that the latter should have been pursued to the exclusion of the former. Again, over sixty years later, we are faced with a crucial lack of context; bombing technology during the war never permitted a clear distinction between area and precision bombing. Even with the Norden bombsight, the AAF average Circular Error Probable (CEP) cannot be held up as evidence of "precision" bombing; com-



Iconic images. These scenes of suffering shocked the world and reveal the brutality of Japanese militarists before and during World War II. Above, a tiny survivor of a Japanese bombing attack on Shanghai, China, in 1937, sits amid the destruction of the city's South Station railroad. Below, prisoners of war, Americans soldiers, are shown near death during the infamous Bataan death march in the Philippines in 1942.



pared to today's pinpoint bombing capability, which Grayling emphasizes, Allied "precision" capability sixty years ago was very poor. <sup>19</sup> Not entirely devoid of military or industrial targets were, of course, Japan's urban areas. Cottage industries that manufactured war materiel were located throughout them. LeMay observed, once the war was over, that Yokohama, for example, had been bombed out, and that for miles all that was standing were the drill presses that had survived destruction.

Truman, like Roosevelt before him, was determined to end the war as quickly as possible. In mid-1945 there were approximately two million soldiers



A Japanese Army communications unit in the field.

on the Japanese home islands and upwards of several million more being organized into a home army. Intelligence indicated about 600,000 defenders on Kyushu in early August. Also, Kamikaze aircraft threatened, having taken a serious toll in the Okinawan campaign. According to recent scholarship, MAGIC intercepts of Japanese Foreign Ministry message traffic revealed that the Japanese military planned a massive last-ditch homeland stand should the Allies invade. Moreover, the enemy had determined exactly where American forces would land on Kyushu. Marshall was certain that an invasion would produce horrific casualties:

We had to assume that a force of 2.5 million Japanese would fight to the death, fighting as they did on all those islands we attacked. We figured that in their homeland they would fight even harder. We felt this despite what generals with cigars in their mouths had to say about bombing the Japanese into submission. We had killed  $100,000\ldots$  in one raid in one night, but it didn't mean a thing  $\ldots$  <sup>21</sup>

After researching Japanese sources and interviewing Japanese officials who had served in the 1945 government, historian Alvin Coox determined that an invasion of the home islands would have been enormously costly, a bloodbath. He judged that Operations OLYMPIC and CORONET "would have incurred casualties at the upper range of the wartime estimates of personnel losses because of the ferocity and unyielding resistance of the Japanese defending the homeland and the unresolved problem of the Kamikazes."<sup>22</sup>

With the end of the war, following the atomic bombings of Hiroshima and Nagasaki and Soviet entry into the conflict, Arnold was satisfied that the unprecedented surrender of Japan, a modern industrial nation, was accomplished by air attack and blockade. His final wartime report to the secretary of war, in which he stated the official view of the AAF, stressed that Japan's collapse "vindicated the strategic concept of the offensive phase of the Pacific war." AAF strategy had, according to Arnold, advanced air power,

both land and carrier-based, to the point where the full might of crushing air attack could be loosed on Japan itself, with the possibility that such attack would bring about the defeat of Japan without invasion, and with the certainty that it would play a vital role in preparation for and cooperation with, an invasion. No invasion was necessary.<sup>23</sup>

Arnold maintained that the atomic bombs "did not cause the defeat of Japan, however large a part they may have played in assisting the Japanese decision to surrender." The Japanese surrendered "because air attacks, both actual and potential, had made possible the destruction of their capability and will for further resistance." Those attacks "had as a primary objective the defeat of Japan without invasion." The atomic bomb, Arnold further maintained, had given the Japanese "a way out." They could not have held out long "because they had lost control of the air. They could not offer effective opposition to our bombardment, and so could not prevent the destruction of their cities and industries." Their situation had become "hopeless." According to Arnold,

a modern industrial nation such as Japan would not have admitted defeat at this stage of the war unless her industrial potential had been hopelessly weakened, the morale of her people seriously affected, and her isolation from the essentials necessary to wage war rendered virtually complete by blockade and the destruction of her Navy and merchant fleet.<sup>25</sup>

As historian Richard Overy has written, by mid-August 1945 conventional bombing had destroyed an area thirty times greater than the area that had been

destroyed by the atomic bombs and had so undermined morale that the option of surrender had been put into play by Japanese officials before the employment of atomic weapons. Japan's morale and economy had been shattered by the bombing and blockade to the point where the nation could no longer continue the war. <sup>26</sup> Because of the conventional bombing campaign, the peace party in the Japanese cabinet had predicted that the war would end by September, earlier than the estimate of October given to Arnold by LeMay. Maj. Gen. Masakazu Amano, of the Imperial Japanese Army General Staff, noted:

The continued incendiary bombings over all parts of Japan, with their devastating effect on vulnerable towns and cities and the virtual impossibility of repairing the damage, were generally responsible for the subsequent uneasiness and lowering of morale among the people. More and more of the people began to doubt the ability of our armed forces to win such a protracted war.<sup>27</sup>

Following Japan's surrender in August 1945, General of the Army Douglas MacArthur, supreme commander, made a survey of areas around Tokyo Bay and concluded that Japan was near economic and industrial collapse: "The fire raids by the B–29s had apparently so destroyed the integrity of Japanese industry as to prevent the continuance of modern war."<sup>28</sup>

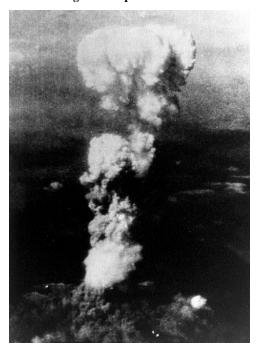
Sometimes ignored in assessments of B–29 operations, the mining campaign was a striking success in the blockade of the Japanese home islands. It was, said General Arnold, the first use of the aerial mine as a "truly strategic weapon." Admiral Nimitz commented that "the planning and technical operation of aircraft mining on a scale never before attained has accomplished phenomenal results." Although the submarine was the major weapon against Japanese shipping, the mine accounted for sixty-three percent of Japanese merchant shipping lost or damaged from March to August 1945. The mining campaign blockaded the Shimonoseki Straits and virtually every major port, crippling the flow of food and materials.

Recent scholarship suggests that the entry of the Soviet Union into the war may have played the major role in persuading Japan to surrender. That the atomic bombs were a major factor is not in dispute, however.<sup>30</sup> Had they not been employed, would Japan have surrendered before the scheduled November 1 invasion of Kyushu? There is, of course, no answer to that question. It is difficult to conceive of any other means whereby Japan would have surrendered with fewer casualties than those suffered at Hiroshima and Nagasaki. Japan had been defeated but was unwilling to give up. The Japanese military and government were, in effect, holding their own people hostage. "The basic policy of the present Japanese government," stated a Combined Intelligence Command report of July 8, 1945,

is to fight as long and as desperately as possible in the hope of avoiding complete defeat and of acquiring a better bargaining position in a negotiated



War ender. The B-29 *Enola Gay* carried the first atomic bomb detonated over Japan, at Hiroshima on August 6, 1945. Col. Paul Tibbets, its pilot and crew commander, stands beside it. A second atomic bomb dropped over Nagasaki three days later by the B-29 *Bock's Car* brought the Japanese to surrender.



peace. Japanese leaders are playing for time in the hope that Allied war weariness, Allied disunity, or some miracle will present an opportunity to arrange a compromise peace.<sup>31</sup>

It is worthy of note that in August 1945 fighting was still going on in Asia. Also, the Japanese were holding tens of thousands of Allied prisoners. By that time, forty-three percent of prisoners in Japanese hands—almost 400,000—had died. Existing evidence suggests that the Japanese would have surely and brutally killed their prisoners had the Allies been forced to invade.

President Truman had a responsibility to the American people to bring the war to an end as soon as possible and to avoid the casualties that an invasion would have caused. There is no doubt that Roosevelt, had he lived, would have made the same decision. Stimson wrote that "at no time, from 1941 to 1945, did I ever hear it suggested by the president, or by any other responsible member of the government, that atomic energy should not be used in the war." Admiral Leahy subsequently noted: "I know FDR would have used it in a minute to prove he hadn't wasted two billion dollars." George Elsey, who worked in Truman's White House, stated that the president "made no decision because there was no decision to be made. He could no more have stopped it than a train moving down a track . . . it's all well and good to come along later and say the bomb was a horrible thing. The whole goddamned war was a horrible thing." The question has been raised as to how a president could answer to the American people, if, after a bloody invasion of Japan, it was discovered that there existed at the time a weapon that could have ended the conflict in the summer of 1945.

The controversy over Truman's decision will doubtless continue. In 1995 an exhibit being planned by the Smithsonian Institution's National Air and Space Museum on the atomic bombings and the end of the war in the Pacific foundered when the facility's head curators put forth a false agenda, a script that portrayed the Japanese more as victims and seemed to suggest that it was the Soviet Union's entry into the war that brought Japan to surrender. The script further suggested that the atomic bombings were carried out primarily to impress the Soviet Union, and that the villain of the conflict was the B-29 strategic bombing offensive. However, we ought to keep in mind the situation that Truman confronted. Although significantly weakened in the blockade and bombing of 1945, Japan still had millions of troops under arms and occupied vast territory. Also, Truman had inherited an unconditional surrender policy from Roosevelt. Moreover, according to ULTRA intelligence, between April and August 1945, the Japanese increased their troop strength on Kyushu to well over a half million. American plans called for landing eleven Army and three Marine divisions on the island. With their Kamikazes, suicide boats, and submarines, the Japanese estimated that they could destroy fifty percent of the U.S. invasion force before it even hit the beach. The invasion would have been terribly bloody, probably resulting in the vicinity of 75,000 American casualties. "Judging by the difficult terrain," naval officials observed, and "the scarcity and poor quality of the roads, the small size

and capacity of the railroads and tunnels, and the prevailing weather conditions, it was fortunate that the invasion of Kyushu took place after the surrender and not before."<sup>35</sup>

As to the Potsdam Declaration, calling for Japan to surrender unconditionally or face "utter destruction," and speculation that a statement should have been included to assure the protection of the institution of the emperor, there is no way of knowing whether the Japanese would have yielded. However, as Professor Theodore McNelly has written, unconditional surrender involved not only the institution of the emperor. It involved war crimes trials, occupation, disarmament, and the liquidation of Japan's conquered empire.<sup>36</sup> In fact, the fanatical Japanese militarists were still in control. Even after the Soviet Union declared war on Japan—not a complete surprise—and a second atomic bomb was dropped, militarists implored the Japanese to fight on. They even attempted a palace coup on August 14, 1945, but were beaten back by troops loyal to the emperor. It certainly seems highly doubtful that if the atomic bombs were not used, the Soviet entry into the war by itself could have forced Japan to quit. From a perspective of sixty years, it is easy to speculate. Truman did not enjoy the luxury of hindsight. In the wake of the costly Battle of Okinawa, and the Japanese buildup on Kyushu, he was most worried about American casualties. The atomic bombs ended the war. An invasion of the Japanese mainland, with horrific casualties on both sides, was not required.

As to the continuing debate over what played the major role in Japan's surrender, the emperor's rescript, or pronouncement, to the Japanese people, delivered by radio on August 15, noted that

the enemy has begun to employ a new and most cruel bomb, the power of which to do damage is indeed incalculable, taking the toll of many innocent lives. Should we continue to fight, it would not only result in an ultimate collapse and obliteration of the Japanese nation, but also it would lead to the total extinction of human civilization. Such being the case, how are we to save the millions of our subjects; or to atone ourselves before the hallowed spirits of our imperial ancestors? This is the reason we have ordered the acceptance of the provisions of the Joint Declaration of the Powers.<sup>37</sup>

The emperor issued another rescript on August 17, addressed to the Japanese military: "Now that the Soviet Union has entered the war, to continue under the present conditions at home and abroad would only result in further useless damage and eventually endanger the very foundation of the empire's existence." 38

In the first instance, on August 15, the emperor addressed the Japanese people. He made it clear that the bombings were the major reason for his nation's surrender. For those who make the case that the entry of the Soviet Union into the war was the primary reason for capitulation, and who thus point to the August 17 rescript, in which the emperor did not mention the atomic bomb, it should be emphasized that in the latter case the emperor was addressing the military after



Emperor Hirohito. The man who was regarded as a god by his people before and during the war was allowed to remain on the throne of Japan.

the surrender. He desired that his soldiers should stop fighting and lay down their arms, including the large Japanese Kwantung Army in Manchuria.

Again, the Soviet declaration of war was not unexpected. The USSR had made clear that it was not going to renew its neutrality pact with Japan. On the other hand, the atomic bombings were entirely unexpected, clearly shocking to the Japanese. It might also be argued that the Soviet declaration of war, not expected until later in August, was hurried precisely because of the atomic attack on Hiroshima. General Spaatz, who believed that the Japanese would have surrendered without the atomic attacks, also believed that the Soviet entry into the war had little effect: "The Japanese forces in Manchuria were remote from the forces assembled to repel our attack on the Japanese homeland." What is certain is that speculation will forever surround the question of what factors compelled the Japanese to surrender.

Historians have rightly pointed out that the judgment of airmen that conventional bombing would have driven the Japanese to surrender cannot be divorced from the roles and missions conflict and the drive for air independence. Nevertheless, the airmen's claim should be considered on its merits. It should be noted that Spaatz and Eaker believed that conventional bombing would have convinced the Japanese to stand down perhaps two or three months later than atomic bombing. Also, the airmen were joined by naval leaders, who

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made the case that bombardment *and* blockade would ultimately topple the enemy without the use of atomic weapons. Richard B. Frank emphasized that "the airmen . . . had an institutional interest in proclaiming the effectiveness of conventional, as well as atomic attack. Accordingly, these statements packed a lot of baggage behind their superficial representations of sound military judgment." It would appear, however, that the airmen's judgment was something less than superficial, given that conventional bombing attacks in the spring and summer of 1945 had so distressed the Japanese that they thought of surrendering before the employment of the atomic bomb. This view was clearly stated after the war by many high-ranking Japanese governmental officials. Of interest is Prince Konoye's recollection:

It seemed to me unavoidable that in the long run Japan would be almost destroyed by air attack so that merely on the basis of the B–29s alone I was convinced that Japan should sue for peace. On top of the B–29 raids came the atomic bomb, immediately after the Potsdam Declaration, which was just one additional reason for giving in and was a very good one and gave us the opportune moment to open negotiations for peace. I myself, on the basis of the B–29 raids, felt that the cause was hopeless. 42

The factors that compelled the Japanese to surrender and the impact of the conventional B-29 campaign were uppermost in Arnold's mind at the end of the war. To him, the atomic bomb seemed to provide the emperor a way to save face, as indicated in the first address to the Japanese people. There seemed to be truth to the Japanese saying that the atomic bomb was the real Kamikaze, since it saved Japan from further destruction. The atomic attacks allowed the Japanese to escape the grip of the military fanatics. Arnold, of course, always had his sights on the struggle for the independence of the air arm. After years of war-time decisionmaking and finally making the B-29 operational, he was most concerned that the use of the atomic bombs had eclipsed the accomplishments of the conventional strategic campaign between March and August 1945. That campaign, as he saw it, had validated his conviction that a modern, industrial nation could be driven out of a conflict without being invaded. In this vein, Arnold wrote to Spaatz: "We were never able to launch the full power of our bombing attack . . . the power of those attacks would certainly have convinced any Doubting Thomases as to the capabilities of a modern air force. I am afraid that from now on there will be certain people who will forget the part we have played."43

## VI

# THE POSTWAR DRIVE FOR INDEPENDENCE

The establishment of an independent air force after World War II may have seemed inevitable, but from 1945 to 1947 the Army Air Forces (AAF) mounted a strong effort to ensure that the United States Air Force (USAF) would be created. AAF leaders testified before Congress and formed groups within AAF headquarters to consider postwar reorganization. They did these things against the background of an explosive demobilization that left the AAF in a shambles, hardly the mighty force that had been built up during the war. The birth of the USAF in September 1947 was traceable in large measure to the awesome power wielded by the AAF in World War II. The drive for independence was also aided by favorable public opinion, by concerted planning in Arnold's headquarters during the war, by a strong postwar interest in air independence in Congress, and by the firm support of President Harry S. Truman and Gen. Dwight D. Eisenhower.

Air independence was also aided by a threatening Soviet Union. President Roosevelt had not thought in terms of a postwar balance of power. He looked forward to goodwill between the Soviet Union and the United States, a kind of "era of good feeling." Roosevelt's somewhat utopian thinking reflected the traditional American view that war was an exception, an interruption to the normal state of relations between nations. Once war ended, so the struggle for power would end; harmony would be restored. Americans seemed to combine naive optimism and a penchant for believing that problems were likely to go away if they ignored them.

The Soviets harbored no such illusions concerning the basic nature of mankind. During the war, they suspected the United States and Britain of deliberately delaying the opening of the second front in the West. Generally, the Soviets were never able to dispel the idea that their Allies harbored hostile intentions toward them. At the Yalta Conference in February 1945, Premier Joseph Stalin had made and received concessions on United Nations membership, had agreed to zones of occupation in Germany, and had promised to support self-government and allow free elections in Eastern Europe. The victors would cooperate

Harry Hopkins, President Roosevelt's confidant, held an opinion prevalent in the administration that the United States could get along with the Soviet Union indefinitely. However, free elections and democratic governments meant something quite different to the Soviets. In Poland, Hungary, Bulgaria, Romania, and Albania, "free elections" meant the barring of parties not in sympathy with the Communists, and "democratic governments" meant Communist regimes. Also, by early 1946, it had become obvious that the Soviets were not withdrawing their

troops from Iran and were attempting to reduce that country to a Soviet satellite state.

In addition to Iran, Turkey also was feeling pressure from Moscow, when the Soviets in 1946 attempted to gain control of the administration of the Dardanelles Strait. Also in Greece, guerrilla warfare had erupted in the fall of 1946. The United States rejected the Soviet demand for a share in the Dardanelles, and in August 1946 sent a naval task force to the eastern Mediterranean. The infusion of U.S. naval power into the area set the precedent for the presence in the region of the Sixth Fleet far into the future.

Then, in March 1947 President Truman outlined to Congress what became known as the Truman Doctrine. "Totalitarian regimes imposed on free peoples," he stated, "by direct or indirect aggression, undermine the foundations of international peace and hence the security of the United States." He proposed that Congress approve \$400 million in economic and military aid for Greece and Turkey. "Great responsibilities have been placed upon us by the swift movement of events," he acknowledged.



Yalta Conference, February 1945. At the height of Allied unity during World War II, Prime Minister Winston S. Churchill, President Franklin D. Roosevelt, and Premier Joseph Stalin met to plan for Europe's postwar organization and recovery. Roosevelt hoped that cooperation between the West and the Soviet Union would continue after the defeat of Germany and Japan.

Truman's stance was conditioned by America's atomic bomb, whose destructive power had been demonstrated in 1945 at Hiroshima and Nagasaki. Although the official AAF view after the war did not necessarily downgrade the military impact of the atomic bomb, the air position was basically conservative, emphasizing the continuing need for conventional air power. In the summer of 1946, the United States conducted Operation CROSSROADS, a series of atomic tests at Bikini Atoll in the Pacific. These tests—actually, two atomic explosions—confirmed the power of the atomic weapon. Meanwhile, immediately after the war General Arnold requested that General Spaatz convene a board (which included Generals Hoyt S. Vandenberg and Lauris Norstad) to study the impact of atomic weapons. The board concluded that the atomic bomb had not altered AAF strategic concepts. In the near term, the bomb would be in short supply and long-range heavy bombers would continue as the only means of delivery. Eaker noted that AAF leaders believed that the atomic bomb should not affect postwar planning. "We assumed it would never be used again, so it would have to be a conventional Air Force." Also, in 1946 and 1947, the Joint Chiefs of Staff (JCS) had yet to develop an integrated war plan. The AAF, however, had taken steps to structure a nuclear strike force, beginning to build the first postwar atomic warfare-capable wing in 1946 around the 509th Bombardment Group, which had dropped the atom bombs on Japan in August 1945.

The airmen's drive for independence played out against two conflicting currents. One was the sharp demobilization—between V-J Day and April 1946, the AAF dropped in strength from 2,253,000 to 485,000, reaching its postwar nadir of 304,000 in May 1947—and the other was the intensification of the Cold War. In this connection, General Arnold observed: "The American people have never sponsored a strong peacetime military organization. History has demonstrated that we have thereby neither avoided war nor deterred others from going to war." The traditional American isolation from world affairs and maintenance of small peacetime forces were about to end.

The postwar drive for air independence moved relatively quickly. Within the Army, the issue in effect had already been decided during the war. General Marshall was sufficiently prescient to realize that the air arm would play a crucial role in winning the war. He and Arnold agreed to put off the issue of independence until after the war. There was no doubt that Marshall would ultimately support independence for the air arm. Meanwhile, during the war he determined that the airmen required autonomy and representation in the War Department's policy and operational councils. Before the war, he had heard from Frank Andrews about the difficulties that airmen were facing. When war erupted, he had learned from General Arnold about the hostility to airmen within the War Department General Staff. Marshall aimed to correct this state of affairs with the reorganization of March 1942. Although Marshall would leave the Army in November 1945, his successor, General Eisenhower, strongly supported the Army airmen.

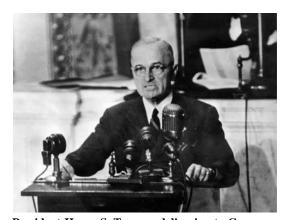
Externally, the struggle for air independence primarily involved the Navy and the arena of national politics. Not only did the Navy oppose the establishment of a separate air force, it also fought against the reorganization of the U.S. national security structure, believing that the wartime system of coordination within joint committees was good enough for the postwar period. On the national scene, President Truman spearheaded the reorganization drive when, in December 1945, he delivered a speech to Congress calling for defense reorganization and an independent air force. With the lessons of Pearl Harbor in mind, Truman sought to establish a postwar national security organization with the military under unified command, able to respond immediately to any sudden attack.

Shortly after Pearl Harbor, General Arnold had formed postwar planning groups in AAF headquarters. After the Japanese surrender, he mobilized planning cells to design an independent postwar air force. Viewed by some as an aggressive, shifty promoter, no one could deny Arnold's ability to plan for the future. He believed that the interwar Air Corps had been denied autonomy because at the time unity of command meant either unified Army command on land or unified Navy command on the sea; coordinate status for the air element cut across essential unity of command. In addition, the airplane was seen as an auxiliary to land and naval power. However, during the war, in every major theater a coequal air force emerged under supreme command. With coequal status the air commander could demonstrate for the theater commander what air forces could do.

Arnold's primary goal was to establish a United States Air Force in the postwar national security reorganization. Taking the "lessons" of the war, as he understood them, he advocated unified command and, as important, a sound research and development organization. "Each new crisis in our history," Arnold lamented, "has found our armed services far from effectively, efficiently, or economically organized. With each crisis, modernization and coordination have been hammered out under war pressure at great waste of resources, to be allowed in large measure to lapse when the crisis is over."3 What was needed in the immediate postwar environment, Arnold believed, was the "coordinate organization" of ground, air, and naval forces in operational theaters, each under its own commander, and each responsible to a supreme commander. What was further needed was an air force able to present its budget directly to higher authority rather than the War Department first. And although coordination during the war had been achieved—sometimes haltingly—through the Joint Chiefs, during peacetime the system would pose serious problems. The nation required an independent air force whose primary responsibility was developing and employing what Arnold termed "fundamental air power" carried out under supreme overall direction. Arnold defined fundamental air power as land-based strategic and tactical air forces.<sup>4</sup> The postwar revolution in national security organization had deep roots in the experience of World War II.

To Arnold, the atomic weapon ushered in an era that would be dominated by air power. Japan had surrendered without invasion. The atomic bombing of Hiroshima and Nagasaki had given the emperor "a way out" after the B–29 conventional bombing offensive had destroyed his country's war economy. Arnold urged that the postwar U.S. military be built to deter war by maintaining a force in being. His concept of an independent air force as a ready force in being was unprecedented in American military history. Arnold believed that the United States required a standing force, alert to retaliate against an aggressor's capacity to wage war. This was the policy of strategic nuclear deterrence. Air power would become the primary instrument of American foreign policy. Arnold's concept of air power rested upon what he termed the basic "principles of American democracy," one of which is that "personnel casualties are distasteful. We will continue to fight mechanical rather than manpower wars." The war had demonstrated that its cost in lives and resources had become prohibitive. America needed a military establishment with the most modern weapons at minimum cost to the taxpayer.

Arnold's views were more than underscored by Eisenhower, returned to the United States from Europe and set to succeed Marshall in November as Army chief of staff. Throughout his career Eisenhower had maintained a high regard for airmen, an opinion fortified by the performance of General Spaatz, Eisenhower's airman in northwestern Europe during World War II. Eisenhower later claimed that during the war Spaatz never made a mistake. In framing his ideas on postwar national security organization, Eisenhower relied on his wartime record as commander of the largest military force in history. Having in part played the tactful diplomat during the war, mediating frequently between "prima"



President Harry S. Truman delivering to Congress the speech that outlined what became known as the Truman Doctrine, March 1947. Growing international tensions that erupted when World War II ended and the Cold War began convinced Truman that a major overhaul of the national defense establishment was necessary.

donnas," Eisenhower had little patience with the parochialism of postwar Washington. In his view, unified command, not easily achieved during the war, became key to organizing the postwar military establishment. Making plain his support for a separate air force, Eisenhower testified in November before the Senate Military Affairs Committee: "The Normandy invasion was based on a deep-seated faith in the power of the Air Forces in overwhelming numbers to intervene in the land battle . . . the Air Forces by their action . . . have the effect on the ground of making it possible for a small force of land troops to invade a continent."

Like Arnold, Eisenhower asserted that unified command was a necessity: "No system of joint command could possibly have brought victory to our cause." Informed by his all-encompassing experience during World War II, Eisenhower always made the point that the military services comprised a single fighting team. Eisenhower felt strongly about teamwork and service parochialism:

At one time I was an infantryman, but I have long since forgotten that fact under the responsibility of commanding combined arms. I believe it is honest to say that I have forgotten that I came originally from the ground forces, and I believe that my associates of the Air and of the Navy in that command came to regard me really as one of their own service rather than one of the opposite.<sup>8</sup>

In fact, Eisenhower during the entire war saw the armed forces as comprised of three equal parts—ground, sea, and air. He constantly referred to "our three great fighting arms." The armed forces, he explained, "should rest on a three-legged stool with each leg equally important—Army, Navy, Air Forces." When the war ended and the Navy unilaterally pursued its own requirements, Eisenhower offered his opinion that no service should be considered independently. The services were mutually supporting.

Eisenhower was convinced that in peacetime strict economy would be the watchword. Three coequal military departments under a single defense establishment would deliver the most "bang" for the taxpayer "buck." There was never any doubt as to Eisenhower's advocacy of an independent air force: "The air commander and his staff are an organization coordinate with and coequal to the land forces and the Navy. I realize that there can be other opinions . . . but that seems to me to be so logical from all our experiences in this war, such an inescapable conclusion that I, for one, can't even entertain any longer any doubt as to its wisdom."

Lt. Gen. James H. Doolittle, also testifying before the Senate Military Affairs Committee, posed this question: "To obtain proper development of air power is it desirable to place the air force in a position subordinate to another component having another major preoccupation, or is it better to place it on a status of equality with the land and sea forces?" 11 Doolittle, who in 1934 issued a lone dissent to the *Baker Board Report*, 12 pressed for the development of the

nation's air power within a separate service. "Unity of command is not only required in the theater of operations," Doolittle stated, "but also at home." It is the "home organization" that will control training and doctrine. The country needed commanders who understood the various military services and could foster teamwork. "How do you obtain men," he asked, "who are able in the crisis of war to produce effective teamwork with their brothers of the other two services under a single commander?" The answer, he suggested, is that they be trained in peacetime in an organization where the services function under single direction. Thus, they gain experience thinking in broad terms, larger than those of a single service. "The first lesson," Doolittle continued, "is that you can't lose a war if you have command of the air and you can't win a war if you haven't." In the post—World War II period, a sound, economical defense establishment can be achieved by a program of fundamental research, the establishment of an air force coequal with the land and sea forces, and the creation of a single Department of National Defense to coordinate the three component services.

Like Eisenhower and Arnold, Marshall highlighted the military forces as a team. National security "is measured by the sum, or rather the combination of land, air, and naval forces. The urgent need is for an overall . . . appraisal of what is required to solve the single problem of national security with the greatest economy compatible with requirements."14 Marshall felt that the military services needed to work out their requirements before presenting them to Congress and the president. He opposed the wartime system of relying on the JCS and the joint committees for coordination and elimination of duplication. This system was no substitute for unified direction. The Joint Chiefs could not be effective as a peacetime coordinating agency. "In light of our wartime experience with combined operations," Marshall stated, "no one will suggest that we should now revert to the complete separation of the Army and Navy which prevailed in the years before the war." <sup>15</sup> Moreover, he noted that it was important that as the services attempted to resolve the question of unity of command, they not allow details to obscure fundamental principles. Once they agreed on the fundamentals, they could tackle larger problems more rapidly.

Marshall, who provided the impetus for the 1942 watershed reorganization of the War Department General Staff, always knew how organizations should function: "Committees at best are cumbersome agencies," he noted, "especially when the membership owes loyalty and advancement to chiefs installed in completely separate governmental departments." The level of cooperation achieved in wartime, according to Marshall, would be impossible to reach in peacetime, when there "is no longer a compelling necessity to reach at least compromise agreements on major matters." The problem, as the Army chief saw it, was reflected in, for example, the Navy's strength proposal, which failed to contain an overall vision for the postwar defense establishment. Worse, it had failed to consult or inform the War Department. Marshall saw national security as a unitary issue that could not be addressed on a piecemeal basis. He did, however,

support the continuation of the Joint Chiefs of Staff within a unified department. The chiefs would submit policy, strategy, and budgetary recommendations to the president, but through the civilian head of a unified department. Marshall decried the tendency in the services to aim for self-sufficiency. This would not be possible in the postwar era. He noted that during the war "time was the compelling factor, not money. In peace, money will be the dominating factor." <sup>18</sup>

While Marshall, Eisenhower, and Arnold agreed on the necessity of unified command in the postwar era, Eisenhower and Arnold believed in a larger postwar force than did Marshall. Flowing from his view that in peacetime, money, not time, would be the problem, Marshall felt strongly that austerity would rule the day. He remembered that after World War I Congress had rejected the idea of a large standing army. "He often talked about it," General Eaker recounted, "the hastening of it, complete demobilization." Truman, Marshall, and Secretary of War Henry Stimson favored UMT (Universal Military Training). Truman's UMT plan envisioned a citizen army with young, able-bodied male citizens receiving military training and then joining the ready reserve. The president did not believe



Gen. George C. Marshall. As Army chief of staff, Marshall supported the air arm consistently throughout World War II and saw its eventual full independence from the ground forces as inevitable.

that the nation in the postwar era could afford a large standing Army. UMT, he posited, was a less expensive alternative and would be a deterrent to aggressors.

Marshall figured that Congress would not support an Army of more than than 275,000 troops. Consequently, the peacetime Army would have to rely on a system of universal training. The virtue of a small standing Army was that its leadership could reflect the American society from which it would be drawn. On the other hand, the Air Staff saw UMT as a threat to the 70-group air force and the goal of independence. The War Department had approved a figure of 400,000 troops for the postwar air force, which then determined the number of groups that it could realistically support within this figure. Thus, 70 groups and 400,000 troops became the AAF's postwar ceiling. Reflecting Marshall's opinion, the War Department was certain that Congress would enact UMT. The American people would not support large peacetime forces. The standing peacetime Army would consist of volunteers. A system of UMT would be the answer. Congress, however, backed the 70-group air force as a counterweight.

Both Arnold and Eisenhower favored a standing Army as opposed to UMT. General Ira Eaker noted that "Eisenhower was more optimistic about what he



Gen. Dwight D. Eisenhower. Succeeding General Marshall as Army chief of staff, the supreme Allied commander of World War II relied confidently on the air arm, which he believed had earned equality with the Army and Navy.

could get out of Congress, than Marshall was. Marshall, with his World War I experience, was more pessimistic . . . and had UMT in mind." Arnold, after the war, promoted the concept of a standing air force in being, a deterrent force. By this he meant a thoroughly trained combat force. In late 1944 and early 1945, he pointedly expressed to Marshall that UMT should not be substituted for an M-day force—a standing air force. In the event of war, a substantial training establishment would be required. The Army Air Forces clearly opposed the UMT program, put forth by General Marshall and President Truman.

Truman was a strong proponent of UMT. As he saw it, the United States could either maintain a large standing Army or rely on a small Army supported by trained citizens. In October 1945, in an address to Congress, he declared that the country should depend upon a relatively small professional force backed by a well-trained citizen reserve:

The backbone of our military force should be the trained citizen who is first and foremost a civilian, and who becomes a soldier or sailor only in time of danger—and only when Congress considers it necessary . . . This conforms more closely to long-standing American tradition. The citizen reserve must be a trained reserve. We can meet the need for a trained reserve in only one way—by universal training. <sup>21</sup>

Truman recommended that the postwar military organization consist of comparatively small regular forces, a strengthened National Guard, an Organized Reserve, and a General Reserve composed of all male citizens who had received Universal Military Training. The General Reserve, as envisioned by Truman, could be quickly mobilized, but would not be obliged to serve unless called up by an act of Congress. To man the General Reserve, he argued for the adoption of UMT, under which citizens would be trained for one year. Young men would enter UMT upon graduation from high school or at the age of eighteen, whichever was later. Truman believed that this system would give the nation "a democratic and efficient military force."22 However, many in Congress saw a strong air arm as an alternative to a draft that would be required to support Universal Military Training. Truman appointed a UMT commission headed by scientist Karl Compton that in May 1947 recommended a UMT program. Critics, however, claimed that UMT would amount to a form of peacetime conscription, be prohibitively expensive, and tend to militarize society. Mobilization potential seemed less vital than building up in-being forces. Congress postponed action on UMT legislation.

President Truman also supported the creation of a new national security organization and an independent air force. "One of the strongest convictions which I brought to the presidency," he recalled, "was that the antiquated defense setup had to be reorganized quickly as a step toward insuring our future safety and preserving world peace." <sup>23</sup> Truman continued to be especially disturbed by the Pearl Harbor failure which he laid at the feet of faulty organization and com-

munications within the chain of command. "We came to the conclusion," he noted, "that any extended military effort required overall coordinated control in order to get the most out of the three armed forces. Had we not early in the war adopted this principle of unified command for operations, our efforts, no matter how heroic, might have failed."<sup>24</sup>

Truman, who during the war had served on the Senate Military Affairs and Appropriations Committees and chaired the Special Committee to Investigate the National Defense Program, wanted a new national security structure that included an independent air force. He wanted to reorganize for the nation's long-term security. In his view, the country would "be taking a grave risk with the national security" by not reorganizing. As for the Joint Chiefs of Staff, he stated that during the war, coordination through the JCS system "was better than no coordination at all," but it was basically a committee system with inherent defects. In peacetime, with severe budget constraints, the system would not work well: "As national defense appropriations grow tighter, and as conflicting interests make themselves felt in major issues of policy and strategy, unanimous agreements will become more difficult to reach." No longer could the country afford to have service members "working at what may turn out to be cross purposes, planning their programs on different assumptions as to the nature of the military establishment we need and engaging in an open competition for funds." 26

A keystone of Truman's forward-looking concept of reorganization was the establishment of the U.S. Air Force. "Air power," he noted in his landmark December 1945 address to Congress, "has been developed to a point where its responsibilities are equal to those of land and sea power and its contribution to our strategic planning is as great."<sup>27</sup> In Truman's view, unification became an evolutionary process, with the formation of a Department of Defense the first step. The Navy dragged its feet, fearful that a separate air force would absorb naval aviation. Based on the World War II model, Secretary of the Navy James V. Forrestal advocated coordination through the joint committee system, opposing a single department and a separate air force.

Noting that the proposed legislation constituted one of the most radical organizational steps in the nation's history, Forrestal opposed the formation of an independent air force, stating that he could only agree to steps to prevent the AAF from reverting to its prewar status. He also was set against the position of secretary of national defense, believing that it would be all-encompassing, beyond the capacity of any one man. According to Forrestal, the secretary would be beholden to the military and "would have authority without knowledge, and authority without knowledge must inevitably become impotent." Consequently, Forrestal prophesied a diminution of civilian control of the military.

Reorganization would produce neither efficiency nor economy. Forrestal emphasized that the Army Air Forces, while gaining autonomy during the war, found it necessary to set up, apart from the Army, its own duplicate functions such as air inspector general, air judge advocate, and air surgeon. Moreover, he observed that the JCS "has been one of the great developments of the war." Forrestal recommended that the JCS system, with its committees, should continue as the primary coordinating team for the postwar period.

He distinguished between unified command in the combat theaters and the planning apparatus in Washington. While single command in the field was necessary, "democratic processes and procedures" as to decisions on strategy were required at home. Forrestal was also concerned with the lack of specifics in the draft legislation. He was especially uncomfortable with Marshall's and Eisenhower's view that legislation should emphasize fundamental principles with specifics as to functions, for example, detailed later. He also warned that merging the two departments into a single Department of Defense would be a mistake. The Navy had operated successfully based on the fundamental principles of business, stressing centralization of policy and decentralization of execution. Forrestal made the point that "bigness" was no guarantee of success. The larger an organization became, the more difficulty it had gaining efficiency.<sup>29</sup>

Adm. Ernest J. King, chief of naval operations, was concerned that immediately after the war Congress was considering a revolutionary change in the same military organization that had won the world war. This, despite the all-out demobilization underway. He opposed the creation of a "super secretary" and a single commander of the armed forces, potentially the "man on horseback." King



Gen. Henry H. "Hap" Arnold. The first and only airman to achieve five-star rank was a tireless architect of U.S. Air Force independence.

opposed an independent air force, preferring that the issue of air organization be handled within the War Department itself. He wanted the two-department organization retained and the Joint Chiefs of Staff system, which in his view had proved to be so effective during the war, continued. Advocating an evolutionary, rather than a revolutionary approach, King proposed an expansion of JCS functions. "If the Navy's welfare," King stated at the time, "is one of the prerequisites to the nation's welfare, and I sincerely believe that to be the case, any step that is not good for the Navy is not good for the nation."

In one of the more striking developments after the close of the war, Adm. Chester W. Nimitz, who in 1944 had favored a single department with the Navy retaining its own aviation as well as that of the Marine Corps, abruptly executed an about-face, emphasizing that because of large-scale operations in the Pacific toward the end of the war he no longer supported reorganization. Naval aviation had made a major contribution to victory in the Pacific war. Fast carriers had become the spear-point of the fleet during the war. Nimitz stated that he could not see any fault "so grave that only a drastic reorganization can correct it." The Joint Chiefs should continue as the major decisionmaking and coordinating entity at the highest strategic level. Nimitz pointed to the success in the Pacific war as proof that a single department would not work as well as two separate departments. Specifically, reorganization would work to the disadvantage of the Navy. It had yet to be proved, he stressed, that merged War and Navy departments would result in the improved conduct of wartime operations or even produce greater teamwork between the services. Nimitz favored unity of command and supported the creation of a national security council and a central intelligence organization. As to a separate air force, he was opposed to it. It would facilitate "triplication." The air force, he felt, should remain part of the War Department and be integrated into its administration and logistics.<sup>31</sup> And like Forrestal and the entire Navy leadership, Nimitz remained deeply concerned about the future of naval aviation and the Marine Corps. Interestingly, Francis P. Matthews, Forrestal's successor, noted in 1949 that, upon assuming office, he was distressed to find that there still remained undisguised resistance to unification on the part of key naval officers.

In response to Truman's desire to reorganize the defense establishment as quickly as possible, the Senate Military Affairs Committee formed a subcommittee to draft appropriate legislation. General Norstad, assistant chief of the Air Staff, Plans, and Vice Adm. Arthur W. Radford, deputy chief of naval operations (air), were appointed advisors to the subcommittee. Norstad was to play a major role organizing the AAF for independence and drafting the National Security Act of 1947 and the Unified Command Plan. He became the point man on the Army team that included Robert P. Patterson, secretary of war; Dwight D. Eisenhower, Army chief of staff; and W. Stuart Symington, assistant secretary of war for air, subsequently the first secretary of the Air Force. Norstad's manifest contribution to structuring the postwar national security establishment formed the basis for his

later statesmanlike performance in the position of supreme allied commander, Europe. Forrestal, in what proved to be a master stroke, replaced Radford with Vice Adm. Forrest Sherman, deputy chief of naval operations. Sherman possessed the temperament and experience that nicely complemented Norstad's.

Arnold had kept an eye on Norstad even before World War II. Shortly after the United States entered the war, Arnold brought the young officer into his personal Advisory Council, a small group that he used to accomplish anything that he thought needed to be done, and it at one time included Fred Dean, Charles Cabell, and Jacob Smart. In 1943 Arnold sent Norstad first to England and then to the Mediterranean to give him the appropriate operational experience. He then brought him back to AAF headquarters in Washington in 1944 to serve as chief of staff of the Twentieth Air Force and then as assistant chief of Air Staff, Plans. Norstad brought not only relevant experience to his postwar tasks, but also an appropriate temperament. He was a negotiator who could take on the issues and compromise if necessary. Arnold emphasized to Norstad that he needed to take the lead in crafting the AAF's programs on postwar reorganization and unification. In retrospect, Norstad noted that he took an intense interest in the evolution of unification. With Admiral Sherman, an advisor to the unification subcommittee, he closely followed the ebb and flow of various proposals in hearings and in the press, and met with various politicians on Capitol Hill.<sup>32</sup> As noted, the appointment of Sherman marked a turning point. Forrestal and Nimitz knew that Sherman did not oppose the creation of an independent air force, and they figured that he could work and negotiate much more effectively with Norstad. In retrospect, Radford stated that Sherman and Norstad "removed the impasse between the services."33

Another appointment helped clear the way to unification legislation. General Eisenhower, Army chief of staff, subsequently appointed Norstad as director of plans and operations for the War Department General Staff. This was only the second time that an airman had occupied this position, the first being Frank M. Andrews. Norstad's appointment provided him more leverage in discussions since he represented not only General Eisenhower, but also Secretary of War Patterson. Although he reported to both of them, Norstad subsequently revealed that he did not have to clear anything with them, such was their confidence in the airman as the representative of the War Department. It is important to note that Eisenhower's selection of Norstad showed his confidence in the airman, and it also signaled to the War Department General Staff the maturity of the Army air arm, as Eisenhower saw it.

The major organizational problem to Patterson was that the defense establishment comprised two separate military entities, each operating virtually on its own, each crafting its own requirements. With coordination in the Joint Chiefs system, results often rested upon "mutual good feeling" and a willingness to cooperate. During the postwar era, with brutal competition for funds, the nation could not rely on the committee system. Patterson pointed to the budget process,

wherein the services prepared budget estimates independently, without conforming to any national strategic plan. Moreover, even in the review process, programs were considered independently. He noted the absence of any official, civilian or military, authorized to review the national defense as an entirety, except the president.<sup>34</sup> Among other things, this process fostered "empire-building" within the services, which is difficult to root out with the existence of two independent departments. This was a point that Eisenhower frequently made. He suggested that the "empire builders" be rooted out with a "sledgehammer."

Norstad was the War Department's point man for unification negotiations. In mid-1946, he reported to Arnold:

I think we would underestimate the Navy if we thought for a moment that they would not take advantage of every possible means of stalling off final action. This may not, however, work entirely to their advantage since it is becoming evident in many quarters that the more the subject is discussed, and the more clearly understood the general framework of a single department becomes, the greater is the willingness to accept it as a necessary forward step.<sup>35</sup>

Always with an eye on public opinion, Arnold also directed Norstad to be the AAF's spokesman to the media. Here Norstad made it a point to brief some of the nation's major columnists including Hanson Baldwin, Arthur Krock, and Joseph and Stewart Alsop.<sup>36</sup>

Norstad and Sherman always appeared together before the committee. "We agreed," Norstad stated, that "one would notify the other and would also suggest to the committee that they call the other member . . . Sherman and I were invited every time . . . it was clear that there were differences between us . . . but they never really split us on the principles." Norstad and Sherman complemented each other. As pragmatists, they asked: What is the problem? What is the objective? They realized that President Truman strongly desired legislation to reorganize the national security structure and in their roles as adjuncts to the Senate committee they had been put in a position to resolve issues that divided the services. They determined at the start to define the issues and to work out between them what seemed to be reasonable solutions that would pass muster with the service they represented. 38

Norstad and Sherman dealt with three interlocking issues: the organization of unified commands, the organization of national security, and service functions. The question of overseas unified commands remained sensitive after the end of the war. In Europe during the war, unified command had been established. In the Pacific it was different. There was no way either Gen. Douglas MacArthur, commanding the Southwest Pacific theater, or Adm. Chester W. Nimitz, commanding the Central Pacific, would relinquish authority to the other. President Roosevelt and the Joint Chiefs of Staff realized this. As a result, both MacArthur and Nimitz pursued separate strategies, supported by the JCS, while the

Twentieth Air Force's B–29s continued, under JCS direction, to pound the Japanese home islands.

Truman, Marshall, Eisenhower, Arnold, and Spaatz all stressed the importance of unity of command, which had been sorely lacking in the Pacific theater during the war. Norstad and Sherman defined unified command as a theater commander acting under the direction of the Joint Chiefs of Staff, with a joint staff, and three component service commanders under him. They crafted a plan in which the overall theater commander would control land, sea, and air operations in a specified area. They solved the problem in the Pacific by creating two commands—the Far East Command and the Pacific Command. Seven unified commands were established under the Outline Command Plan, approved by the Joint Chiefs, and signed by Truman in December 1946, setting the operational stage for the remainder of the century.

Also noteworthy in the command plan, the JCS recognized the Strategic Air Command (SAC), one of three major air combat commands formed in March 1946, as an Army Air Forces command consisting of strategic air forces not otherwise assigned and usually based in the United States. The creation of SAC rested upon a rationale of two related concepts. The first was that a sustained strategic air offensive, aimed against the enemy's war-making capacity, could drive him to capitulation. The second corollary posited that, whereas during World War II there had been time to gain the ultimate victory, future conflicts would probably be decided early. Because of the enormous destructive potential of the atomic bomb, the time required to reach a decision in war had been vastly reduced. The so-called cushion of time, which as a continental nation the United States had always enjoyed, could no longer be counted on. No longer would it be possible to mobilize after hostilities started. The era of come-from-behind victories was over. This was the genesis of the concept of forces in being. It would be necessary to deter aggression. The Joint Chiefs did not formally assign a mission to SAC until April 1948 and it was not formally described in Joint Action Armed Forces as a JCS specified command until 1951. Nonetheless, in 1946 and 1947, for all practical purposes, SAC operated as a specified command. As mentioned, SAC became the natural follow-on to the Twentieth Air Force, commanded by Arnold during the war as executive agent of the Joint Chiefs. SAC, like the Twentieth, would operate as the long-range strategic bomber force under directives promulgated by the Joint Chiefs of Staff. Thus, service component forces would be commanded by the unified commander acting under the direction of the Joint Chiefs through an executive agent. As a result, service roles became restricted primarily to organizing, training, and equipping forces for operational employment within the unified command structure.

Following Truman's approval of the Unified Command Plan, Norstad and Sherman concentrated upon crafting national security legislation. "We never wasted time," Norstad said, "rearguing established differences between the services. We outlined the issues." The Navy had wanted roles and missions writ-

ten into the legislation. While Eisenhower and Marshall insisted that the primary objective should be broad principles and the avoidance of getting bogged down in details, the Navy was much concerned that impending legislation would fail to spell out the responsibilities of the services, specifically naval functions. Navy leaders insisted that roles and missions be detailed in the National Security Act. In early 1946 Forrestal pointed out that there was nothing in the draft legislation "to show how the essentials of internal reorganization are ultimately to be accomplished . . . The bill might well result in wiping out existing organizations without providing for adequate substitutes ready to take over their work and carry it forward without disruption."40 Norstad, however, emphasized that the bill should describe general principles and not become mired in details. He argued that roles and missions should not be legislated into the National Security Act: "Injection of this subject into legislation is unsound and I am convinced that the fight that would result would successfully sabotage" any legislation. And Eisenhower noted that "intelligent men can make almost any organization work if your law isn't too rigid."41 Eisenhower and the AAF won on this point.

Navy leaders, under intense pressure from President Truman and Congress, realized that they would need to engage in structuring unification legislation. Consequently, Sherman, a moderate, was appointed to replace Radford, the



Authors of President Truman's Unification Plan. Meeting the press to explain the particulars of defense reorganization are, seated, James V. Forrestal and Robert P. Patterson. Behind them are, left to right, Maj. Gen. Lauris Norstad, Fleet Adm. William D. Leahy, Gen. Dwight D. Eisenhower, Fleet Adm. Chester W. Nimitz, and Vice Adm. Forrest P. Sherman. Photo courtesy of the U.S. Naval Institute.

hard-liner. Working with the committee, Norstad and Sherman were able to agree on service functions and draft organization, which called for a secretary of national defense and Departments of the Army, Navy, and Air Force, each headed by a civilian secretary. Roles and missions were promulgated by Presidential Executive Order 9877 concomitant with congressional approval in July 1947 of national security legislation. The National Security Act of 1947 was a first step. Although Truman had called for "new thinking," the Navy dragged its feet, not only having opposed an independent air force, but also having taken a stand



Secretary of Defense James V. Forrestal, whose position was created under the National Security Act of 1947. As a former secretary of the Navy, Forrestal resisted the creation of an autonomous United States Air Force.

against the entire restructuring of the defense establishment. The Navy's view was best articulated by Forrestal, first secretary of the National Military Establishment and former secretary of the Navy: "The mere passage of the National Security Act did not mean the accomplishment of its objective overnight. It is not strange that professional military men should think in terms of the service to which they have devoted their entire adult lives; it is to be expected. But unification calls for a broader vision." This "broader vision" was exactly what Truman had in mind. It was not easy to produce. Executive Order 9877 failed to resolve the key issues of roles and missions. Nor did the Key West and Newport Conferences in 1948 and 1949 resolve the basic difficulties with the "functions" of the armed services.

At Key West, the Joint Chiefs agreed that strategic bombing was the major responsibility of the new Air Force, but that the Navy could strike inland targets

#### THE POSTWAR DRIVE FOR INDEPENDENCE

and potentially could employ the atomic bomb. Although a new Executive Order, 9950, was issued, the Air Force was convinced that the supercarrier and the Navy's long-range patrol bombers threatened its primacy in strategic operations. At Newport, the Air Force was given the primary planning responsibility for strategic bombing, but in wartime would also call upon the Navy. Thus, although roles and missions friction revolved around resources for the strategic mission—the development of the Navy's new supercarrier and the Air Force's B–36 bomber—the interservice struggle was intertwined with fiscal and technological factors. Postwar budgets were about ten percent of their wartime peak. At the



First leaders of a new military service. Secretary of the Air Force W. Stuart Symington and Chief of Staff of the Air Force Gen. Carl A. Spaatz led the air arm in its transition to full independence.

same time, weapons procurement had escalated. Consequently, the conflict between the Air Force and the Navy was basically a struggle over a diminishing defense budget.

The National Security Act of 1947 was a starting point. Depending upon points of definition, only after decades would a truly integrated national military establishment evolve. Although the experience of World War II became the culminating point in the drive for an independent air force, passage of the 1947 act had taken a great deal of postwar effort. W. Stuart Symington, the first secretary of the Air Force, disagreed with critics who thought that the Navy had succeeded in shaping the legislation to suit its own purposes. Nor did he share the opinion of those who thought that Norstad had given away too much to the Navy, especially in crafting the secretary of defense's position as a coordinator rather than as the strong administrator that the Army and Air Force desired. Symington pointed out that "Norstad should get the most credit for unification. In the days

when it looked grim, he stuck to it."43 Nonetheless, the work that Norstad and Sherman accomplished failed to receive applause in all quarters. It was in fact resented by some in both the Air Force and the Navy. Norstad recalled that both he and Sherman, due to compromises that they made, had become "suspect." Sherman's role was resented by admirals who strongly opposed the establishment of an independent air force. On the other hand, some in the Army Air Forces thought that, as Norstad put it, "I had not diminished the naval air service." Norstad remained convinced that the Navy required aviation to accomplish missions which were distinctive to its function. Interestingly, General Arnold initially questioned whether Norstad had come away with the best deal possible for the AAF. The problem as Arnold and Eaker saw it was that the National Security Act sanctioned four air forces.

However, Norstad and Sherman succeeded in a difficult task because they enjoyed critical backing both in the Army and the Navy. Forrestal and Nimitz



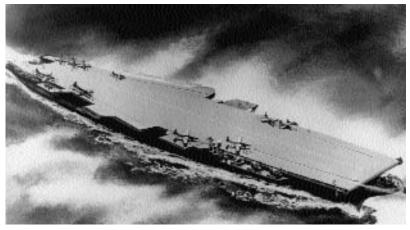
The B-36 Peacemaker. With the new long-range aircraft the Air Force was given the primary responsibility for strategic bombing during interservice struggles over roles and missions.

tried to support Sherman after they saw to it that he replaced the hard-nosed Radford. Norstad, first of all, benefited from the support of his mentor, General Eisenhower, and also from the support of Spaatz, Patterson, and Symington. Norstad initially had talked with Patterson and both men were definite as to what objectives they wanted to pursue. Patterson's view was, "you pick a man to negotiate, in whose judgment you have confidence and who you feel understands the objective you have in mind, then you back him and you support him. You don't tie him down in little details."<sup>45</sup>

As noted, within the Army Air Forces, Norstad had the enthusiastic backing of Symington and Spaatz. Norstad later emphasized that Spaatz was "as fair and honest a man" as he had ever known. Despite this important support, and even with the passage of the National Security Act of 1947, there were those in

the AAF, including, at one point, Arnold, who faulted Norstad "for not taking the Navy down." The antipathy was so palpable that Norstad asked Spaatz for a transfer out of Washington, preferably to an overseas post. Spaatz and Symington flatly turned him down.

Norstad's success, with Admiral Sherman, in defining the unified command structure and in crafting draft unification legislation, owed a great deal to the part he played in 1945 as an architect of the postwar AAF structure. Under Arnold's and Spaatz's leadership he had to confront the shaping of the postwar air force within a wider vision, that of a unified defense setup. More important, Norstad labored under the influence of two mentors, Arnold and Eisenhower. From Arnold, and from his own upbringing, he learned to believe, to take a concept, think it through, and make it his own. From his immigrant grandfather he learned that "people follow a believer." Don't be objective, his grandfather admonished him, just get things done. In Arnold, he witnessed a believer in



The proposed supercarrier U.S.S. *United States*. In the rivalry between the Air Force and the Navy over roles and missions and, therefore, funding, the ship lost out to the bomber.

action with his grim determination to get things done no matter what the cost. Eisenhower exhibited the power of reason, the importance of optimism, and the determination not to be derailed by details. Establish principles that people can agree upon, Norstad believed, then they will operate with them. Despite the shortcomings of the National Security Act, however, Norstad's contribution to the legislation, to the organization of the unified commands, and to the initial attempt at drawing service functions, remains impressive.

Navy leaders saw their service coming out of the war still as the first line of defense. While the Army and the Army Air Forces would demobilize after the

hostilities, the Navy endeavored to maintain its wartime strength. Adm. William F. Halsey, commander of the Third Fleet, declared: "We must maintain a strong terrier force at the rat hole." He emphasized that he would not be opposed to a two-department organization in which an air force was part of the Army. However, he would oppose a three-department system "under which an Air Department arrogated unto itself all military U.S. aviation or which sought equality upon the cabinet level with an Army and Navy, each of which had integrated aviation components of its own."47 The concept of a single department merging the War and Navy Departments was anathema to the Navy. Forrestal stressed that it was a "fallacy to assume that the difficulties and overlapping inherent in administering two large operations . . . can be resolved by the act of merging them . . . The history of large business organizations . . . does not bear out this happy assumption."48 Basically, the Navy favored refining the defense organization that brought the nation through the war. Consequently, it recommended the continuation or "unification" under the Joint Chiefs of Staff, that entity being legitimized by statute. The two-department organization should remain.

As for the major question of whether an independent air force should be established, the Navy proposed "autonomy" for the Army Air Forces, or the continuation of the status quo. Naval leaders reasoned that if naval air could prosper within the Navy, then the air forces should be able to do the same within the Army. Moreover, should an independent air force be created, the chances were overwhelming that in the future the Navy would be outvoted two to one on all manner of issues critical to its interests. And in a period of dwindling funds, the existence of a separate air force would further siphon monies from the military budget.

In retrospect, the National Security Act of 1947, although a landmark in the evolution of U.S. national security, amounted to a first step in the drive for a unified, integrated defense establishment, a point that Forrestal and Symington, despite serious differences, agreed upon. The act itself, Public Law 253, had the following aims: to establish integrated policies for the three military departments; to "provide for their authoritative coordination and unified direction under civilian control, but not to merge them; to provide for the effective strategic direction of the armed forces and for their operation under unified control; and to provide for their integration into an efficient team of land, naval, and air forces."

The act created the National Military Establishment with Departments of the Army, Navy, and Air Force, each under the direction of a civilian secretary. Note that Congress had created the Air Corps in 1926, which was abolished with the establishment of the United States Air Force (USAF) in September 1947. During World War II, the Army's twenty-eight corps were autonomous. Officers, for example, were commissioned into the corps of their speciality. Personnel spent entire careers in a single corps and officers owed as much loyalty to the

corps as to the Army at large. The corps had great freedom and, as a result, empire-building was rampant. Consequently, when the United States Air Force was established, its leaders decided not to create a corps system. Most USAF officers were assigned to the Officers of the Line of the Air Force where they competed on the same promotion list. Exceptions were chaplains, medical specialists, and lawyers. Each of these resided outside the Line of the Air Force; each had its own promotion list. Within the Line of the Air Force, specialization was accomplished by career fields. Unlike the Army's corps system, officers in the Air Force were commissioned into the Air Force and owed their loyalty to the Air Force.

The secretary of defense was to exercise general direction and control over the three departments. However, there was nothing in the law to prevent the secretaries of the three departments from presenting recommendations directly to the president or the director of the budget. With his powers thus circumscribed, the defense secretary was in a weak position. Forrestal, the first defense secretary, recognized this. He recommended changes to the act which in large measure were codified with the 1949 amendments to the National Security Act.

Thus, although the act gave the airmen independence, it was not what any of the services originally desired. According to General Eaker, the act created four air forces, indicating of course that the final product evolved as a result of the inevitable compromises made by all parties. Symington pointed out that better legislation could have been drawn, but "a bill which was considered better could not have gotten everybody's approval; and therefore would not have given the president the opportunity to show agreement to the Congress and the people. I don't say this is a good book, but I do say it is a good chapter." 50

The Navy lost on the issues of writing roles and missions into the National Security Act and on the major point of establishing an independent air force. The Air Force and the Army were unable to structure the legislation so as to make the secretary of defense a true administrator instead of merely a coordinator. The Air Force had advocated more authority for the secretary of defense because it believed he would be ineffective without it. Moreover, the airmen were confident that because of their experience of the war, the USAF would emerge as the preeminent military service in the postwar world. Ironically, Forrestal suffered as a coordinator, under the weakness of the act that he himself had championed. The services in fact gave in on what they viewed as matters of principle in order to achieve a common objective. This left the key issue of roles and missions unresolved. Nonetheless, the act was the best legislation that could have been achieved at the time.

Truman's choice of Forrestal to be secretary of defense was a bold one. Forrestal had the credentials to convince the Navy to get on board with unification. The Air Force, however, feared that as secretary of national defense, he ultimately would lean toward the Navy's position on roles and missions and other issues. Having advocated coordination as opposed to administration, Forrestal

now faced a difficult task as "a coordinator." The New York Times pointed out editorially:

It has been painfully evident all through the long hearings and debate in Congress that there are many in the Navy who still distrust the whole idea. With Forrestal as the secretary, the Navy opponents of unification will know that there is at the top a man who has an intimate knowledge of their branch of the service and one to whom it will not be necessary to spell out in detail their side of the case when difficulties arise.<sup>51</sup>

As noted, Symington argued that the 1947 act should have been viewed as a logical first step in reorganizing the military establishment. He was convinced that eventually the secretary of defense would have great difficulty operating as a coordinator between the military services. In fact, shortly after the act took effect, Symington stressed that it would "have to be changed in order . . . to work."

Forrestal found out early that he could not overcome service disagreements over the allocation of resources and the assignment of responsibility for many programs. He lacked decisionmaking authority and had badly misjudged the divisive character of the issues. Also, he concluded that his staff was not sufficiently large to accomplish the work before it. Indeed, in a moment of grim humor, or perhaps icy clarity, he said: "This office will probably be the greatest cemetery for dead cats in history." The official history of the Office of the Secretary of Defense concludes that "one of the most painful experiences of Forrestal's public career was reluctantly concluding that the statute he had done so much to engineer contained serious defects." General Eisenhower early in 1949 observed that Forrestal was "obviously most unhappy." He appeared to have become somewhat disenchanted with the Navy's "party line" and seemed to side with the Army's view more often.

Experiencing early reservations about the 1947 act, Forrestal had informed President Truman in early 1948 that he required a deputy to deal with the intense interservice rivalry and that an enormous workload was swamping his staff. He felt that the Joint Staff needed to be augmented and that the service secretaries should be removed from the National Security Council. There were other critics. Lt. Gen. Lauris Norstad, deputy chief of staff for operations of the new USAF, emphasized that, under the act, the right of appeal to the president by the department secretaries should be eliminated because it undercut the defense secretary's authority.

The National Security Act was amended in 1949 and gave the secretary of defense more authority than Forrestal ever had. In a sense, Forrestal was a victim of his own championing of the 1947 act, which legitimized the secretary of national defense as a coordinator rather than an administrator. Moreover, with the huge drop in the postwar defense budget, the services would inevitably grapple over ever-diminishing funds. Caught in a whipsaw, Forrestal came under enor-

mous stress, and by early 1949 was afflicted with deep anguish. After being hospitalized in May 1949, he took his own life, the victim of an office that held great responsibility without commensurate authority.

The 1949 amendments converted the National Military Establishment into the Department of Defense, making it an executive, or cabinet-level department, and downgrading the services from executive to military departments. In addition, the secretary of defense gained "direction, authority, and control" over the department and became the "principal assistant to the president in all matters relating to the Department of Defense." The departmental secretaries also lost their previous statutory right to make recommendations directly to the president or budget director, and they could no longer sit in on meetings of the National Security Council. The secretaries could, however, make recommendations to Congress.<sup>54</sup>

"We finally succeeded," Truman exulted, "in getting a unification act that will enable us to have unification, and as soon as we get the crybabies into the niches where they belong, we'll have no more trouble." This comment was taken by observers as a slap at the Navy and Marine Corps leaders who had opposed unification and remained reluctant to embrace it. In fact, Forrestal's concept of the secretary as coordinator had failed. The secretary did not have sufficient authority and could not make the necessary decisions on programs and resources. Thus, the 1949 legislation marked a first critical change in military organization away from decentralization toward a highly centralized national defense bureaucracy.

## **EPILOGUE**

The twentieth century was the century of aviation, its evolution making an impact upon almost every avenue of endeavor. On the battlefield, the advance of military aviation forced nations to reassess not only how they fought wars but also how they controlled and organized air forces. The question of air organization surfaced almost simultaneously with the advent of the airplane, and in the United States it was a bone of contention even before World War I. This book is about air organization, the mastery of which leads to the control of air forces and success in war. The ability to organize can be difficult to recognize, and contrary to what some historians and other observers have opined for years, the record indicates that General Arnold possessed it in abundance.

Between the world wars, numerous bills to give Army airmen autonomy or independence were introduced in Congress. Army airmen argued that they should be able to control the air forces, state their requirements directly to Congress, and have their own budget and promotion list. Although none of these gains evolved before World War II, the interwar period was marked by some progress. Foremost was the creation of the General Headquarters (GHQ) Air Force as recommended by the *Baker Board Report*. Called by some "America's first Air Force," it brought air striking forces together in a single entity.

Arnold's becoming chief of the Air Corps in 1938 upon Oscar Westover's death marked a turning point, which was congruent with Nazi Germany's aggression in Europe. In the several years leading up to World War II, when President Roosevelt demanded huge increases in aircraft production, Arnold undertook the prodigious task of building up America's air power. It was not easy. Roosevelt insisted on diverting much of the industrial output intended for the Army air arm to Britain and other nations; it was in America's interest to keep them in the fight against the Axis. A determined Arnold persevered, never slackening his pace, and after Pearl Harbor he fashioned concepts in aircraft manufacture, personnel, organization, and training that gave wartime success to the global Army Air Forces (AAF) and presaged postwar service independence.

For Arnold, the creation of the Army Air Forces represented another step toward independence, although the newly formed Air Staff still answered to the War Department General Staff, and the airmen did not get their own budget and promotion system. Relations between the Air Force Combat Command and the AAF were as rocky and divisive as were those between the chief of the Air Corps and the GHQ Air Force. Thus, the expansion of the AAF led Arnold and General Marshall to postpone serious consideration of air independence until after the war. Because of the intense growth of wartime requirements and attendant break-

down of the General Staff, Marshall and Arnold allowed their airmen the necessary flexibility to organize the air arm for global warfare. The so-called Marshall reorganization of March 1942, regarded as the "most drastic and fundamental change" experienced by the War Department since the creation of the General Staff in 1903, gave the AAF de facto autonomy. Moreover, it allowed Army airmen to better control the air forces in theaters of war. And in World War II, as Kent Roberts Greenfield has pointed out, Allied strategists could count on a new element of force—air power—which "rose to a place alongside land and sea power, and transfigured all strategic calculations."

With the formation of the Twentieth Air Force in April 1944, Arnold succeeded in establishing independent command in the Pacific—free from the control of theater commanders—when the Joint Chiefs of Staff (JCS) designated the commanding general, AAF, as "executive agent" to direct the long-range B–29 campaign against Japan. Thus, in the Pacific, the AAF in effect gained equality with the ground and sea forces. In January 1944 the U.S. Strategic Air Forces in Europe had been formed under the Combined Chiefs of Staff (CCS) to direct long-range operations of the Eighth and Fifteenth Air Forces. Operational control under the CCS was vested jointly in the chief of the Air Staff, RAF, and the commanding general, AAF.

Arnold was the architect of modern American air power. When the deter-



The emblem of the United States Army Air Forces. The air arm had begun as the Aeronautical Division of the Army Signal Corps to become the Army Air Service, then the Army Air Corps, and finally the Army Air Forces before achieving independence as the U.S. Air Force.

mination of others flagged, his generous store of energy and ideas and his conviction that the U.S. bombing offensive eventually would be decisive spelled the difference. He saw to it that America's assembly lines churned out unprecedented numbers of airplanes, as he funneled them to the theaters of war in seemingly endless streams. Arnold insisted that his operational commanders concentrate massive power at the critical point. And when they did not, despite what many viewed as insurmountable problems, he became frustrated, impatient, and he relieved them; witness Eaker and Hansell, two of his long-time associates. Like all great leaders, he never allowed personality or sentimentality to cloud his judgment and muddle his decisions. Despite being in poor health during the war—he suffered several heart attacks—he drove himself without restraint, setting the example with his tenacity. Fortunately, Arnold understood politics in the broad sense and in this respect the Allied cause had an ideal commander. Arnold had an extraordinary ability to grasp an idea and push it through interminable channels to fruition. Through the prewar years and then during the global conflict, his knowledge of American industry and rapport with its captains, proved indispensable. More than any other airman, he shaped the air arm.

Arnold, whose career spanned the period from the Wright brothers to the atomic bomb, may not have been a great tactician or strategist. During the war, he left those competencies to his operational commanders. He took for himself a



The seal of the United States Air Force. The service became fully independent, equal to the Army and Navy, on September 18, 1947.

grander role. He built the Army Air Forces almost from scratch to the mightiest force the world had ever seen; from the small prewar Air Corps to the AAF that dropped the atomic bombs and ended the Pacific war. The AAF rose from the smallest element in the Army to the largest. Less than one-eighth of the entire Army in 1939, it expanded after 1941 to become larger than any of the combat arms. Arnold was the right man for the job of commanding the AAF in the war. Yet, as we have seen, his leadership was anything but inevitable. Only after the resolution of his arguments with Roosevelt over aircraft production estimates and Westover's death was he able to rise to the opportunity and responsibility of enlarging and structuring the Army's air arm. Arnold's critics maligned him as a poor, slipshod manager and to a degree they were correct. Yet, the great irony was that Arnold knew how to build and manage air forces. Air Marshal Sir John Slessor, who observed Arnold over a long period, described him as wise, with "a big man's flair for putting his finger on the really important point." No one outpowered him in recognizing the control to be gained from proper organization. He held an instinctive ability to look into the future and to prepare for it.

In many ways, Arnold and General Spaatz complemented each other. The air chief regretted not having seen combat in World War I. Spaatz, in contrast, in 1918 left his command of the Issoudun flying school in central France and raced to the front, where in three weeks of combat flying he downed several aircraft, winning the respect of the pilots serving under him. Arnold realized that Spaatz had a good grasp of operations, of what aircraft could do, and of how to get the tough missions carried out. Where Arnold was a cajoler and organizer, Spaatz was a hard-driving operator and strategist. Where one could be irascible, the other was even-tempered.

Over the years, the two men cultivated a special rapport. Spaatz picked up on the advantages of flexibility from Arnold. He also exhibited in 1944 and 1945 an uncommon sense of purpose, when it was badly needed, in his unyielding prosecution of the European strategic bombing offensive. Similarly, in 1946 he realized that the times called for extraordinary energy, stamina, and single-mindedness, all to be concentrated on the goal of independence. Arnold had handed over the reins of the Army Air Forces that he himself had largely built to Spaatz. Although he knew well the crucial importance that the strategic function would play, Spaatz found that Eisenhower's support had been bought at the cost of establishing a tactical command in the postwar air organization. The former supreme commander, having succeeded Marshall as War Department chief of staff, had not wavered in his support for unification, but Eisenhower wanted to make certain that he could count on the tactical air forces to support the ground army. Thus, the close relationships among top wartime commanders continued between Spaatz and Eisenhower. Having ably served Eisenhower in North Africa and then in the decisive phase of the European war, Spaatz had gained his respect. Eisenhower had brought Spaatz along with him and had come to regard him as his air commander.

General Arnold never lost sight of the war's lessons. As a member of the Joint Chiefs of Staff, he occupied a seat at the high table of policy and strategy. The war taught that unified command, as opposed to joint command, was necessary. The broad and successful application of air power—tactical, strategic, and support—proved that the nation required an independent air force organized and controlled by airmen. Arnold believed that centralized direction should be key to postwar reorganization. He had driven the creation and conduct of the U.S. Strategic Air Forces in Europe and then in the Pacific, exhibiting the power of the long-range bomber. The Twentieth Air Force was decisive in carrying the war to the Japanese homeland and its creation was a landmark in the evolution and organization of air forces. As executive agent of the JCS, Arnold personally willed his B–29s to crush Japan and force its surrender. Here, he constantly stressed the connection between wartime operations and planning for the postwar independent air force.

This treatise focuses primarily on the Pacific war, but we should bear in mind that in Europe the Allies needed several years, new tactics and equipment, and a rebound from near failure before the combined bomber offensive—together with the Normandy invasion, air-ground coordination, and other critical factors—brought Germany to collapse. The THUNDERCLAP idea, meant to show that the war could be won by a single all-out blow, proved false. The effect of the bombing, Arnold believed, was "more like that of cancer, producing internal decay, ultimately resulting in death." Long-held assumptions about strategic bombing tactics were unworkable in combat, indeed, were almost disastrous, until the bombers were accompanied by long-range escorts. The self-defending bomber formation did not work. Historian Noble Frankland correctly stated that the air offensive was classical and not revolutionary. It was classical because the gaining of air superiority over an enemy was still necessary, and in Europe, the bombing, although long delayed, finally destroyed the German war effort. The invasion of the continent succeeded, with a crucial assist from the Allied air campaign, particularly the American achievement of winning command of the air.

A different situation obtained in the Pacific. Over vast oceanic expanses, air and naval power were the premier weapons. For the United States, able to use its B–29s, breaking the enemy's will to continue took less time and fewer bombs in Japan than it had in Germany. Japan, unlike Germany, was more vulnerable to fire bombing and its defenses were inadequate to blunt the onslaught. Invasion proved unnecessary; the war was ended and lives were saved. In the spring of 1945, conventional B–29 strikes forced Japan to begin the search for peace. As R. J. Overy has pointed out, the difference between atomic and conventional bombing was "largely academic" because Japan's urban centers were so vulnerable to fire bombing. Ironically, what the airmen hoped for in Europe came true in the Pacific; the B–29 fire bombing offensive crumbled Japan.

As a futurist, Hap Arnold was usually a step ahead of everybody. His ability to see and plan for what lay ahead was striking. His final report of November

1945 to the secretary of war was surely one of the most comprehensive and prescient summaries of World War II. Mindful of the peril of self-satisfaction, even after great triumph, Arnold cautioned that an air force "is always verging on obsolescence, and in time of peace . . . will always be inadequate to meet the full demands of war." The focus, he believed, should always be ahead, buttressed by industry, science, and technology. Doctrine must constantly be honed and farsighted. Arnold predicted huge changes. He saw the decline of manned aircraft, noting that unmanned vehicles would be of "increasing importance." Air power itself, according to Arnold, could become obsolete.<sup>2</sup> For someone wedded to aircraft and air power from their infancy to the end of the global war, these visions were nothing less than stunning.

The Soviet Union's menacing activities soon after the war reinforced the suspicion among air leaders of a major threat. The airmen thought that they knew the Soviets. They had dealt with them during the war. When building shuttle bases, or negotiating for an Anglo-American air presence in the Caucasus, or arranging for Lend-Lease shipments, American air leaders found the Soviets difficult and uncompromising. They did not play by the rules.

What was the cast of mind of these airmen? They were idealists as well as practical men, dreamers as well as technologists. Their idealism was rooted in the belief that there existed rational, structured solutions to the complex problems of



Gen. Carl A. Spaatz, the first U.S. Air Force chief of staff, and Lt. Gen. Curtis E. LeMay, a future U.S. Air Force chief of staff. They are shown in 1947 when Spaatz was nearing retirement and LeMay was commanding the U.S. Air Forces in Europe. The two represent military aviation's transition into the postwar, modern era.

the postwar world. To the charge that their view was self-serving, they could reply that their belief in air power was not recent—air power's contribution to victory over the Axis was substantial—and that their opinion of its postwar role remained positive: "peace through strength."

Nor was their idealism rooted in parochialism divorced from global concerns. Forgotten is the postwar support for the United Nations (UN) by air leaders who felt that the organization could succeed, that it deserved a chance to build a framework for a peaceful world order. AAF Letter 47-32 of June 17, 1946, states that an air force in being was vital to the security of the United States because it could "support the UN with adequate and effective air contingents" and "preserve the peace until the international organization succeeds." Although a UN military force, including air units, was never established, America's attitude toward the use of air power reflected a time-honored idea among many that the nation has a special mission or destiny. With their belief in what air power could accomplish—winning the peace, deterring war, and making the UN credible by an international military force—airmen were among this nation's premier idealists. Air leaders advocated forces in being, replacing America's peacetime tradition against a standing military force. They were, a noted military editor observed, "the revolutionists of their time."



The Predator unmanned aerial vehicle (UAV). The creation of such weapons as the UAV was foreseen by Gen. Henry H. Arnold in 1945. The air power visionary stressed that the service must always look to the future and maintain its technological superiority.

Clearly, victory in World War II had been gained not only by weapons and industrial capacity but also by superior planning and organization. The nation's leaders, civilian and military, agreed that never again should the United States be caught as unprepared as it was before Pearl Harbor. Preparedness became the postwar watchword. Consequently, at war's end, it was clear that a return to prewar organization was not an option. Civilian and military leaders believed that this was true for the nation's defense organization in the combat theaters as well as in Washington headquarters. The war showed that teamwork and centralized control of operations were mandatory. As Eisenhower pointed out, "the war indicated that joint command was found lacking; unified command was absolutely necessary to success in the field. By unified command we refer to component commanders in the theaters of war reporting to a theater commander with a joint staff, responsible to the Joint Chiefs." The war also proved beyond doubt the maturity and importance of air power. Before the war, critics of air power had argued that the claims of air advocates amounted to nothing but theory. That argument died in the wartime skies over Europe and the Pacific. Commanders controlled joint forces, with especially impressive results in the European theater. In the Pacific, unified command was not established and a contentiousness existed between the Army and Navy throughout the war.

With great foresight, immediately after Pearl Harbor, Arnold began forming groups within AAF headquarters to plan for postwar air organization. Also in the midst of the global conflict, Congress continued to study the question of military organization, especially as it related to the air element. In the immediate postwar period, airmen echoed themes that had been sounded since the end of World War I and throughout the interwar years, that efficient and effective air operations and air-ground integration required airmen, with appropriate authority and support, who understood how to organize and operate air forces. Direct command of air forces must be exercised by the air commander. In the years immediately after World War II, these propositions fell on sympathetic ears. The war also brought to light the importance of long-range air operations, which raised unique theater organizational and doctrinal challenges.

Despite Navy reluctance, President Harry S. Truman, the War Department, and the Army Air Forces were determined not only to create the United States Air Force, but also to build an integrated national security structure. Truman determined that unified command was a necessity. In December 1946 he approved the first Unified Command Plan, creating unified commands in geographic areas, taking strategic direction from the Joint Chiefs. Despite the Navy's strong advocacy of the status quo, support by Truman, Eisenhower, and Congress resulted in the landmark legislation of the National Security Act of 1947. Establishment of the United States Air Force was but one part of the legislation that created the modern American national security establishment. James V. Forrestal, to become the first secretary of defense, described the act as "one of the most far-reaching and important steps in government organization since the founding of the nation

itself." The National Security Act is distinguished by its unitary approach, which tackled national security as a single problem.

The National Security Act, however, was only the beginning of an integrated defense establishment. Its major weakness remained—that the secretary of national defense operated as a coordinator, as the Navy had desired, not as an administrator, as the Army and Air Force had wanted. Forrestal, the premier advocate of coordination, realized early in his tenure as the first secretary of national defense, that he had badly misjudged the difficulty of resolving problems between the services. He found that his small staff was being submerged not only by substantive issues such as roles and missions, but also by tasks at hand. Forrestal himself, just months before his death in March 1949, recognized that the Navy was dragging its feet on unification. "Viewpoints," he noted, "have not come together . . . to a large extent, this stems from the fact that the Navy has always been a tightly organized, self-contained service." Its mission had always been sharply focused. As Eisenhower frequently did, Forrestal strongly emphasized the fact that Navy and Air Force personnel had a great deal to learn about each other's limitations and capabilities. This was especially true in the postwar period with the pressure of reduced funding for defense. Forrestal was convinced that the Air Force's long-range strategic strike force would play a crucial role in future conflicts, but he was also convinced that the naval air arm should continue to evolve within its own mission, "distinctly not a competitive one with the Strategic Air Force."5

The relatively new U.S. defense establishment was tested by the Korean War, which had a major impact on the Air Force and shaped the American political-military landscape for half a century. Its lessons for air organization seemed contradictory. The restoration of the Tactical Air Command (TAC) as a major command was not perceived by the Air Force or national authority as the premier lesson of the war. Rather, this first major conflict of the nuclear era resulted primarily in a buildup of the Strategic Air Command (SAC) as the nation's nuclear deterrent and prompted the Eisenhower administration to initiate the New Look military policy.

Eisenhower knew well the flaws in the National Security Act. A staunch enemy of service parochialism, he was set on reorganizing the Defense Department. The 1958 Reorganization Act, a pivotal development in American military organization, removed the military departments from the operational chain of command. The Joint Chiefs became a conduit between the secretary of defense and the unified and specified commands. The act gave the unified and specified commanders control over U.S. combatant forces. The air component commander would serve under the theater combatant commander. The responsibility for preparing and supporting forces remained with the military departments.

The National Security Act strengthened the authority of the secretary of defense, granting him direction, authority, and control over the Department of Defense and the military services. It repealed previous legislative authority that

granted the service chiefs command of their respective services. The 1947 act described "three military departments separately administered," as opposed to the 1958 act which described a "Department of Defense, including three military departments, to be separately organized." Also of importance was 1958 legislation that granted control and direction of military research and development to the secretary of defense and created a director of defense research and engineering. The secretary of defense was also authorized to establish agencies to conduct any service or supply function common to two or more services. Although the 1958 Reorganization Act left the military departments intact, it centralized power in the Office of the Secretary of Defense and gave the secretary more authority to determine strategy in concert with the Joint Chiefs. The service secretaries and chiefs could still present recommendations to Congress.<sup>6</sup>

In the 1960's the organization and control of the air war in Southeast Asia amounted to a conglomeration, with an absence of unity of command of air power. Gen. William W. Momyer, Seventh Air Force commander, reported to Gen. William Westmoreland in Saigon on air operations in South Vietnam, and to Gen. Hunter Harris, commander of the Pacific Air Forces in Hawaii, on air operations over North Vietnam. In addition, the Strategic Air Command, a specified command, received target assignments directly from Westmoreland, releasing more than a third of the bombs dropped in South Vietnam. Consequently, the Korean War and the conflict in Southeast Asia pointed to the increasing importance of tactical air forces. The success of SAC as the nation's nuclear deterrent force meant that tactical air elements would most likely be engaged in conflicts, although in both Korea and Southeast Asia strategic air power was employed. The Korean War, the war in Southeast Asia, and the first Gulf War represented a gray area between the tactical and the strategic.

Ever since World War II and ever since its formation in 1947, the Air Force had advocated a more unified and centralized defense establishment. The pressures of the war in Southeast Asia strengthened the role of the combatant commanders. Air Force Gen. David Jones, chairman of the Joint Chiefs of Staff, observed: "We need to spend more time on our war fighting capabilities and less on intramural squabbles for resources." His efforts and those of others resulted in the Goldwater-Nichols Department of Defense Reorganization Act of 1986, which gave more power to the chairman of the Joint Chiefs and the combatant commanders. Goldwater-Nichols designated the chairman of the Joint Chiefs as the principal military advisor to the president and secretary of defense, responsible for overall strategic planning.

On the heels of Goldwater-Nichols, in the 1990s, issues surrounding the organization, control, and direction of America's military again took center stage following the collapse of the Soviet Union, the end of the Cold War, and the success of the first Gulf War. The experience of the Gulf War, with its blurring of tactical and strategic air missions, led to a historic reorganization of major air commands, the first since the formation in March 1946 of the Strategic, Tactical

and Air Defense Commands. The Air Force reorganization of mid-1992, which combined most of SAC with TAC and part of the Military Airlift Command (MAC) to form the Air Combat Command, headquartered at Langley Air Force Base, Virginia, formed a link to Frank Andrews's command in the 1930s of GHQ Air Force as well as to the Air Combat Command of 1941. Most of MAC's resources and some of SAC's formed the Air Mobility Command.

With the end of the Cold War and the focus on war fighting and joint operations, in 1999 the Air Force moved to bring the service in line with the national strategy of selective engagement. Ten Aerospace Expeditionary Forces (AEFs) were formed to make the Air Force of the twenty-first century an Expeditionary Aerospace Force (EAF). The EAF concept can be traced back to the humanitarian operations of the Air Corps during the interwar period and to the Tactical Air Command's establishment, with the Nineteenth Air Force, in the early 1950s of the Composite Air Strike Force, a reaction to the lack of a quick response at the start of the Korean War. The EAF concept proved itself in the 2003 war in Iraq. Gen. John P. Jumper, Air Force chief of staff, declared: "For the first time in the history of the Air Force, we relied on the Air Expeditionary Force to present the full spectrum of our capabilities to combatant commanders around the world. It is the right war fighting construct for our twenty-first century Air Force."

As we look back over a century of what I call the constant threads or connective tissue in air organization, we do not have to proclaim a revolution in military affairs to recognize the enormous change in the way air wars are fought. Early flights from dusty fields in the 1920s, humanitarian and record-setting flights in the interwar years, immense global operations in World War II, operations in Korea and Southeast Asia during the long Cold War, and operations in the Balkans and in two wars with Iraq have shown clearly that evolution not only in the technology, but also in the organization and control of air forces has enabled American air power to become dominant in today's world. Today's Air Force conducts its traditional missions with greater precision, heavier payloads, and faster reaction time. American air power is now uncontested. As one historian observed, "the aerial arms race, a central facet of the last fifty years, is over."

The advances in organizing and controlling air wars were made by men of faith who believed that evolving technology demanded the control of air forces by airmen. World War II became the crucible that proved the airmen's points. It also underscored the paramount need for an independent air force and unity of command. The last fifty years have seen the development of a unified command system, a focus on strengthening joint war fighting ability, and a tamping down of what Eisenhower called parochialism. The end of the Cold War and the astounding events since the collapse of the Soviet Union have again shown us that we must be constantly weighing how best to organize America's military for the challenges that lie ahead.

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