

Secretaries and Chiefs of Staff of the United States Air Force

Biographical Sketches and Portraits

George M. Watson, Jr.

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FOREWORD

This volume is a unique and concise career compilation of the military and civilian leadership of the Headquarters USAF from its founding in 1947 to 2000. In addition to recording the individual career summaries of the secretaries and chiefs of staff of the United States Air Force, this work tracks the various issues that confronted the Headquarters leadership through its half-century of existence. Also included are the officially designated portraits of the secretaries and chiefs and brief biographies of the artists who created them.

The leaders profiled here came from different backgrounds and diverse fields of training. Included within the secretariat professions are engineers, industrialists, financiers, lawyers, and scientists. The military chiefs came from all walks of life and from all sections of the country—the sons of doctors, teachers, and people in myriad other professions, and from families with and without traditions of military service.

Over the decades these civilian and military leaders faced a number of recurring problems, particularly those involving budgetary, personnel, and weapons system acquisition matters. The secretaries and chiefs of staff of the Air Force were instrumental in developing policies to deal with the post-World War II retrenchment of personnel and equipment in the late 1940s; the post-Korean War spending cuts in the mid-1950s; the resurgence of defense spending following the launch of Sputnik and the start of the Vietnam War; the post-Vietnam War “Hollow Force” Air Force of the late 1970s; the crest of President Ronald Reagan’s defense spending effort to terminate the Soviet “evil empire”; and the peace dividends of the late 1980s and early 1990s at the end of the Cold War. Although these issues are not resolved definitively here, the divergent solutions of the Headquarters USAF staff to these similar problems are tracked vividly.

Aspiring future leaders of the Air Force would do well to peruse these pages to identify the character traits, youthful experience, and professional assignments that carried these people to the peaks of their professions.

RICHARD P. HALLION, Ph.D.

Air Force Historian

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THE AUTHOR

George M. Watson, Jr., is chief of the special projects team at the Air Force History Support Office. He has been an Air Force historian since 1975, serving at Air Force Systems Command and Headquarters USAF. He was chief historian with the Office of the Surgeon General of the Air Force and served as chief historian of the Headquarters USAF Air Staff Branch of the Center for Air Force History. Watson received a bachelor of arts degree from the University of Maine in 1966, a master of arts degree from Niagara University in 1968, and a doctor of philosophy degree from Catholic University of America in 1974. He served in the 101st Airborne Division in Vietnam from 1969 to 1970. He has written numerous articles and conducted many interviews; coauthored *An Illustrated Guide to the Air War over Vietnam: Aircraft of the Southeast Asia Conflict* (1981); and contributed to *The Vietnam War: The Illustrated History of the Conflict in Southeast Asia* (1979) and *The War in the Pacific: From Pearl Harbor to Tokyo Bay* (1991). More recently, he coauthored *With Courage: The U.S. Army Air Forces in World War II* (1995). His book *The Office of the Secretary of the Air Force 1947–1965* (1993) is the authoritative work on that subject.

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INTRODUCTION

The Department of the Air Force: Its Secretaries and Chiefs

On July 26, 1947, the National Security Act established the Department of the Air Force and the United States Air Force. When the act became effective on September 18, 1947, W. Stuart Symington became the first secretary of the Air Force and Gen. Carl A. Spaatz the first Air Force chief of staff. As founded, the civilian hierarchy was to have precedence over the military, but Symington—who previously had served as the assistant secretary of war for air—believed the military was the authority when evaluating the challenges of war and when training and readying a force for conflict. Symington saw his role as articulating the needs of the Air Force and pursuing its requirements through the Congress. His approach was, “Give me the ball and [I will] run with it on the Hill.”

The newly created department authorized the Office of the Secretary of the Air Force (OSAF), an undersecretary, and two assistant secretaries. Both the secretary and the chief of staff of the Air Force attained coequal status with their counterparts within the Departments of the Army and Navy.

This new status was not achieved without struggle. Rather, it was the culmination of years of effort by advocates of air power and proponents of a separate air component. Army aviation activities ran a course from the U.S. Army Signal Corps balloon observation in the Civil War and the Spanish-American War; the foundation of the Aeronautical Division of the Signal Corps in 1907; the award to the Wright brothers of the first airplane contract in 1909; the establishment of the Aviation Section, Signal Corps, in 1914; and the valiant efforts of the 1st Aero

Squadron during the Punitive Expedition against Pancho Villa in Mexico in 1916 and 1917.

On the eve of U.S. entry into World War I, the Army’s air arm found itself poorly equipped and ill-prepared, with only fifty-six pilots and fewer than 250 aircraft, most of which were obsolete. Indeed, at that time the nation’s aircraft manufacturers had produced only 1,000 planes, but the administration naively responded with enthusiasm to France’s request for 4,500 aircraft and fifty thousand men. Even with congressional approval of Secretary of War Newton D. Baker’s request for \$640 million for aviation, the Signal Corps had failed to achieve its goals by the spring of 1918. A reorganization seemed essential, and on May 20, 1918, President Woodrow Wilson ordered the War Department to establish the Air Service. That entity consisted of two agencies: one agency dealt with manufacturers and was under civilian leadership; the other trained and organized units and was led by a military officer. This two-factor structure was further streamlined in August 1918 when President Wilson appointed John D. Ryan to serve as aviation “czar” and strengthen the system. The most significant U.S. contribution to the air war effort was the Liberty engine—not aircraft—because at the signing of the armistice on November 11, 1918, nearly all of the 740 U.S. airplanes at the front in France had been built in Europe.

The U.S. Army Air Service did enjoy some success in its brief wartime experience. With Maj. Gen. Mason M. Patrick organizing the Air Service efforts and Brig. Gen. William “Billy” Mitchell in charge of air combat, the air arm found immediate work flying

reconnaissance missions that proved invaluable in locating enemy troop formations and in supporting U.S. ground forces. In air-to-air encounters U.S. pilots made a good showing, with seventy-one “aces,” each with five or more kills. Capt. Eddie Rickenbacker led the count with twenty-six victories. During seven months of combat, U.S. air forces launched some 150 bombing missions and claimed 756 enemy aircraft and seventy-six balloons destroyed, while losing 289 aircraft, forty-eight balloons, and 237 crewmen.

Few could ignore the important role that air power played during World War I. Its achievements supported efforts by air proponents over two decades to establish an independent air force. Aficionados of the concept pointed to the experience of Great Britain, which in 1918 had combined its army and navy aviation elements into the Royal Air Force (RAF) under an Air Ministry. But the U.S. Army’s leaders viewed the airplane primarily as a support weapon for the infantry and relegated the Air Service to a status similar to the field artillery or the engineers, that is, responsible for procuring aircraft and training flying units. In addition, between 1920 and 1926, attempts to legislate needed changes in the nation’s air defense were blocked by a jurisdictional conflict between the Air Service on one side and the War Department and the Navy on the other. The Air Service was dominated then by a small group of zealots like Billy Mitchell—subsequently court-martialed in 1925 for insubordination—who were bound together by their passion for and practical knowledge of military aviation. They firmly believed that the Air Service should support the advancement of aeronautical science, but they doubted that could happen as long as the Air Service was subject to the direction of those whose views on aviation differed from their own. During that period, a series of boards and commissions studied and restudied the air organization issue, and their efforts culminated in the Army Air Corps Act of 1926. Although the act did not grant independence or autonomy, it did establish the Army Air Corps and ceded it more personnel, aircraft, and prestige than its predecessor had enjoyed.

The act also called for Air Corps representation on the Army General Staff and reestablished a second assistant secretary—the assistant secretary of war for air. F. Trubee Davison was the first person to hold that position, and he remained there until 1932 when he ran for lieutenant governor of New York.

Despite opposition to a separate service and a paucity of funding affecting all the services, the Air Corps achieved a great deal during the interwar period. In concert with flights by both civilian and military fliers who broke records in speed, distance, and endurance, an Air Corps doctrine of precision bombing against industrial targets by heavily armed, long-range bombers began to emerge in the Air Corps Tactical School. A major reorganization in March 1935 established the General Headquarters (GHQ) Air Force, which allowed the Air Corps to achieve unified command over its combat units. This command was headed by Brig. Gen. Frank M. Andrews, a bomber enthusiast and an advocate of an independent air force. It succeeded in removing combat air units from the control of local commanders by obtaining jurisdiction in all matters relating to the organization of units, the maintenance of aircraft, and the operation of technical equipment, maneuvers, and training. Maj. Gen. Benjamin D. Foulois, chief of the Air Corps, retained responsibility for supply and procurement and for developing doctrine affecting the use of air elements.

Despite efforts by the Army General Staff to obtain larger appropriations for the air arm during the mid-1930s, the aircraft inventory in the Air Corps fell in 1936, and Congress authorized it to purchase only a few of the new four-engine B-17s specifically designed for strategic bombing. As late as 1938 only thirteen of these bombers were in the inventory.

The fortunes of air power and its advocates changed when World War II began, as events in Europe in 1939 and 1940 presaged the dominant role of the airplane in war. On June 20, 1941, a further U.S. military reorganization occurred when Maj. Gen. Henry H. Arnold, chief of the Air Corps, became the chief of the Army Air Forces (AAF) and assumed command of the Air Force Combat Command, as the GHQ had been renamed. Less than a year later, in

March 1942, Arnold became the commanding general, AAF—a position that made him coequal with the commanders of Army Ground Forces and Services of Supply. Arnold now reported directly to the chief of staff of the Army, Gen. George C. Marshall, and both men agreed that, although the AAF would have full autonomy within the War Department, any move toward an independent Air Force would be postponed until the end of the war.

Meanwhile, the civilian side of the Air Corps boosted its cause with the April 1941 appointment of Robert A. Lovett as the assistant secretary of war for air—a position that had been vacant since Davison's departure eight years earlier. Lovett was an investment banker who had served in the Naval Air Service during World War I and had retained a keen interest in aviation throughout the interwar years. Although not actually granted statutory power to direct procurement, Lovett was encouraged by Secretary of War Henry L. Stimson to promote aircraft production. At the same time that he advised Stimson, Lovett worked closely with military leaders and was free to voice opinions on a variety of issues outside the formal chain of command.

From April 1940 until the end of World War II, Lovett was vitally concerned that nothing should threaten industry's adherence to realistic aircraft production schedules. He tried to settle labor disputes and at times intervened when the Office of Production Management and, subsequently, the War Production Board, were at odds with AAF contractors, subcontractors, and suppliers. During the war, Lovett acted as a sounding board for industry's complaints and requests. Stimson had a clear conception of Lovett's role and told him, "Whatever authority the secretary of war has, you have."

Lovett and Arnold formed a partnership in fashioning the AAF into the world's most powerful air force. Indeed, beginning with 20,000 men in 1939, the AAF expanded by war's end to a force of 2.4 million personnel. From a 1939 total of 2,400 aircraft, U.S. industry had produced by the end of the war almost 160,000 aircraft, including the B-17 Flying Fortress, the B-24 Liberator, and the B-29 Super-

fortress—the bomber workhorses of the European and the Pacific theaters—and the P-47 Thunderbolt, the P-51 Mustang fighter, and the C-47 Skytrain transport. The tremendous increase in numbers necessitated a reorganization that replaced Air Force Combat Command with four air forces in the continental United States. This force was subsequently complemented with twelve additional overseas air forces.

While tactical air units supported Operation Torch—the November 1942 invasion of North Africa—the Eighth Air Force complemented the RAF with an "around-the-clock" strategic bombing offensive against Germany. Mission after mission pounded targets in Germany, often enduring heavy losses. Beginning in early 1944, the P-51, equipped with drop tanks, provided long-range bomber escort and proved decisive in gaining Allied air superiority. Coordinated attacks by the Eighth Air Force based in the United Kingdom and the Fifteenth Air Force stationed in Italy targeting the German petroleum industry, along with tactical air support of the ground armies, continuously frustrated the enemy. Allied control of the air was attained before the Allied landings in Normandy on June 6, 1944. By war's end, the AAF's strategic campaign had dropped 1.36 million tons of bombs on Germany, at a cost of 67,646 personnel and 8,325 bombers.

In the Pacific theater, Gen. Douglas MacArthur relied on his imaginative airman, Commanding Gen. George C. Kenney, Far East Air Forces, to gain air superiority over the enemy and to advance the bomber line north and west toward the Philippines and ever nearer the Japanese homeland. In addition, the AAF's Seventh and Thirteenth Air Forces supported aircraft carriers under Adm. Chester Nimitz, USN, in their island-hopping efforts in the central Pacific; and the Tenth and Fourteenth Air Forces did the same for Allied forces in Burma and China. From Washington, General Arnold directed the Twentieth Air Force in its B-29 bombing of the Japanese home islands. This air campaign, culminating in two atomic bombs dropped by B-29s on Hiroshima and Nagasaki, induced Japan to surrender, thus obviating a planned two-phase Allied invasion of the Japanese mainland.

After the war, the AAF and the newly appointed assistant secretary of war for air, Stuart Symington, worked toward independence. As the AAF demobilized, Symington sought to instill cost-control measures to coincide with an austerity-minded Congress and public. He believed the AAF “had an unusual opportunity to look toward efficiency, [with] no past heritages, no barnacled procedures to first overcome.” He and General Spaatz, the new AAF chief of staff, worked toward a goal of a seventy-group post-war Air Force.

Having gained its independence with the passage of the National Security Act of 1947, the Air Force meanwhile had created three major combat commands in the United States: the Strategic Air Command (SAC), the Tactical Air Command (TAC), and the Air Defense Command (ADC). Under its commanding general, Curtis E. LeMay, SAC became the dominant Air Force command. Although the Military Air Transport Service played the key role in delivering supplies during the Berlin Airlift and tactical air forces were built up during the Korean conflict, SAC maintained first call on U.S. Air Force resources. Funding would remain a problem for the Air Force as well as the other services throughout the late 1940s. When he left office in April 1950, Symington was disappointed at not having attained a seventy-group Air Force. But the Korean War provided increased funding for a larger air force, new weapon systems, and more personnel, and permitted Secretary of the Air Force Harold E. Talbott to concentrate on other important issues, such as military housing.

During the 1950s, three pieces of legislation diminished the authority of the secretary of the Air Force. The 1949 amendments to the National Security Act gave more power to the Office of the Secretary of Defense (OSD) by granting him an undersecretary and three assistant secretaries. The secretary of the Air Force, along with the other service secretaries, lost their seats on the National Security Council, where they had been coequal with the secretary of defense. The 1953 Reorganization Act further eroded the power of the service secretaries by adding six more assistant secretaries to the OSD. Next, the 1958

Reorganization Act took the service secretaries out of the direct chain of operational (combat) command, which now ran from the president and the secretary of defense through the Joint Chiefs of Staff to the unified and specified commands. That act made the service secretaries responsible for operational support activities, such as training and logistics. Secretary of Defense Robert S. McNamara, appointed by President John F. Kennedy, took full advantage of the powers granted by this legislation.

The 1950s saw a huge Korean War buildup of a ninety-five-wing air force under the leadership of Secretary of the Air Force Thomas K. Finletter and Chief of Staff Gen. Hoyt S. Vandenberg and the beginnings of missile technology. The missile program was advocated by Trevor Gardner, an Air Force special assistant for research and development, and implemented by Brig. Gen. Bernard A. Schriever. General Schriever founded the Space and Ballistic Missiles Organization and later became commander of Air Force Systems Command. Under Schriever, the Air Force developed the Atlas, Titan, and Minuteman long-range missiles and established the basis for the Air Force space program.

Secretary of the Air Force James H. Douglas and Air Force Chief of Staff Nathan F. Twining had to cope with a major retrenchment following the Korean War buildup. But their forced downsizing was alleviated somewhat by the technological advancements in both missiles and satellites spurred by advances of the country’s Cold War nemesis, the Soviet Union. In 1957, prompted by the shock of Sputnik and fears of a “missile gap,” SAC began complementing its bomber fleet with land-based missiles. By the end of the 1960s, more than a thousand intercontinental ballistic missiles were on alert, although bomber numbers had dwindled. Thus the Air Force possessed two key legs of the important triad of strategic weaponry—bombers and land-based missiles—and the Navy fielded the third element—submarine-launched missiles. Meanwhile, TAC benefited from the Kennedy administration’s emphasis on conventional forces that could respond to several protracted conventional conflicts, under the nuclear umbrella.

In Southeast Asia, U.S. strategy was to hold off North Vietnam until South Vietnam became a viable nation, able to defend itself. During the Vietnam War, from 1965 to 1973, the United States dropped three times the number of bombs that it had dropped during World War II.

During the Rolling Thunder air campaign against North Vietnam, from March 1965 to October 1968, the Air Force faced a formidable air defense system. Hampering its efforts were restrictive rules of engagement, such as a thirty-mile restricted area around Hanoi. Rolling Thunder caused about \$2 billion in losses to the North Vietnamese economy, at the expense of perhaps \$2 billion in U.S. aircraft, but it failed to thwart the Communist efforts in the south.

Supplying and transporting troops was a major Air Force war mission, according to Secretary of the Air Force Eugene M. Zuckert; and that charge, as well as ensuring that the men and women of the service were properly equipped, adequately trained, and appropriately deployed, became the role of the secretariat. Secretary McNamara took advantage of the previous decade's legislation that had dampened the powers of the service secretaries to assert the centralized authority of the OSD. This was as troubling a situation for Zuckert, who had known the previous power of the secretariat as Symington's assistant secretary, as it was for the man who had constructed SAC, General LeMay. The Air Force chief of staff, who remained ultimately responsible for the day-to-day activities of the organization, also served as one of the Joint Chiefs of Staff. Thus, Air Force aircraft like the C-47 Skytrain, C-119 Boxcar, C-123 Provider, and C-130 Hercules maneuvered vast supplies over the jungle terrain, while C-141 Starlifters and C-5 Galaxies, assisted by commercial airlines, moved troops and supplies from the United States to Vietnam. SAC B-52 bombers and tactical forces assisted the U.S. and South Vietnamese armies in South Vietnam and struck at North Vietnamese army supply lines along the Ho Chi Minh Trail and in southern Laos where their air strikes supported the Laotian government's counterinsurgency efforts. In addition, operations over Cambodia were designed to support the war in South Vietnam.

Air Force operations at Khe Sanh during the Tet Offensive of 1968 and the Easter Offensive in the spring of 1972 proved notable but could not alone bring the enemy to its knees. Pursuing his Vietnamization policy and anxious to settle the conflict, President Richard M. Nixon ordered a massive bombing campaign, Linebacker I, from May to October, 1972, against targets in North Vietnam and the mining of Haiphong and other ports. As Communist negotiators employed delaying tactics at the Paris peace talks, Nixon ordered Linebacker II, an eleven-day bombing effort that began on December 18, 1972. As a result of the U.S. offensives, a treaty was signed in January 1973, but two years later a North Vietnamese offensive secured a Communist victory.

Following the war, the Air Force had to adjust to tighter budgets and at the same time build up its strategic forces and maintain a readiness in Europe—a theater that had been neglected during the conflict in Southeast Asia. The post-Vietnam retrenchment and modernization of the Air Force actually began while the fighting raged in Southeast Asia. In 1970 Secretary of Defense Melvin Laird popularized the term *total force* to describe the relationship between the active duty and reserve components. Total force was a catchphrase intended, in part, to assure the public that the U.S. National Guard and the Air Force Reserves, although only partially mobilized for the Vietnam War, remained vital elements of the nation's armed forces and were well worth the money invested in them. During the early 1970s, smaller, lighter warheads were developed for installation on intercontinental ballistic missiles (ICBMs) and sea-launched ballistic missiles (SLBMs), and multiple independently targetable reentry vehicles (MIRVs) were introduced.

John L. McLucas became Air Force secretary as the Vietnam conflict ended, and he viewed his role as that of repairing the wreckage caused by equipment losses and dampened morale. With his chiefs of staff, Generals George S. Brown and David C. Jones, McLucas concentrated on newer weapon systems, such as the B-1, F-15, and F-16, and occasionally selected from rival prototypes to avoid the acquisition

difficulties such as cost overruns experienced with the C-5A and the FB-111 of the previous decade. In light of dwindling monies, General Jones professed a policy of “readiness”—that is, streamlining headquarters organizations and pursuing development of high-technology weapons. Budgetary restraint had its effect throughout the force as training and flying-hour retrenchments led some to label the mid- to late-1970s as the era of the “Hollow Force.”

After taking office in January 1981, President Ronald Reagan announced an extensive effort to modernize the Air Force’s strategic forces. The B-1B program, canceled in 1977, was revitalized, and the bomber reached initial operational capability in September 1986. The Air Force modified its B-52G and H models to carry air-launched cruise missiles and modernized its ICBM force by deploying Peacekeeper (formerly M-X) missiles in Minuteman silos. Two stealth aircraft flew for the first time during the decade: the F-117A in June 1981, and the B-2A in 1989.

The Reagan administration also devoted considerable attention to space. Air Force Space Command was activated on September 1, 1982; and in the following March, Reagan introduced the Strategic Defense Initiative (SDI), a wide-ranging effort to investigate technologies that could contribute to a ballistic missile defense. The Air Force transferred its SDI efforts to the Strategic Defense Initiative Organization in 1994.

Throughout the first half of the 1980s, Air Force budgets enjoyed unprecedented double-digit percent real growth, enabling Secretary of the Air Force Verne Orr to concentrate on people issues, such as service personnel housing and the advancement of women. The 1980s also witnessed a trend toward unity among the services that was spurred on by the Goldwater-Nichols Act of 1986. Both of Orr’s chiefs of staff, Gen. Charles A. Gabriel and Gen. Larry D. Welch, supported that effort, although the act reduced their power and that of the other service chiefs in favor of the chairman of the Joint Chiefs of Staff. Earlier, on May 22, 1984, General Gabriel and his Army counterpart, Gen. John A. Wickham, Jr.,

had signed a landmark agreement on “thirty-one joint initiatives” that the Army and Air Force had identified as essential to supporting affordable and effective air/land combat forces. The agreement formalized the “participation of each service in the other’s budget process” and committed them to a “long-term, dynamic process” to exchange, review, and update initiatives. General Welch held that it was natural to pursue joint initiatives, especially because they had saved both Air Force and Army expenditures.

When Iraq invaded Kuwait in August 1990, President George Bush mobilized an international coalition and ordered U.S. military units to carry out Operation Desert Shield, an enormous deployment of forces to defend Saudi Arabia. Within six weeks, Air Force cargo aircraft had brought more tonnage to the Persian Gulf than they had carried during the entire fifteen-month-long Berlin Airlift. The Desert Shield air transporters moved five hundred thousand passengers and nearly five hundred thousand tons of dry cargo a third of the way around the world in about seven months.

Saddam Hussein continued his occupation of Kuwait for five-and-one-half months, defying a series of United Nations’ resolutions and a naval embargo. On January 17 (January 16, EST), 1991, after exhausting every effort to reach a diplomatic settlement of the crisis, the United States and its allies began Operation Desert Storm, a military action to liberate Kuwait. The Persian Gulf War that followed was remarkable for its brevity, relatively low coalition casualties, and decisive result. The Air Force component of U.S. Central Command, U.S. Central Air Forces (CENTAF), provided the centerpiece of the victory. The war lasted only forty-three days—thirty-nine of them devoted to a stunningly successful coalition air campaign against targets throughout Iraq and the Kuwaiti theater of operations (southern Iraq and Kuwait). CENTAF aircraft destroyed Iraq’s air defenses; crippled its electrical source infrastructure; and leveled many of its nuclear, biological, and chemical warfare facilities. Coalition air attacks against Iraqi forces made possible the rapid success of the ground campaign that

followed. The allies drove the Iraqis from Kuwait within one hundred hours.

With the end of the Cold War, the Air Force entered another era of austerity: FY1992 and FY1994 budgets showed –10.0 and –8.5 percentages of real decline, respectively. With a reduced force structure as well as a blurring of the distinction between strategic and tactical missions—which had been evident during the Gulf War—the Air Force under Secretary Donald Rice and Chief of Staff Gen. Merrill McPeak began to reorganize several of its major commands. On June 1, 1992, the Air Force activated Air Combat Command, which combined all of the TAC assets with most of the assets of the SAC and a small portion of those belonging to the Military Airlift Command (MAC). On the same day, Air Mobility Command was established and blended most of MAC’s force structure with SAC’s tankers. Air Force Materiel Command, combining the resources of Air Force Systems Command and Air Force Logistics Command, was activated a month later. Although downsizing and retrenchment were part of the USAF’s reorganization, the USAF adopted the expansive slogan “Global Reach, Global Power” and considered its future role as the guarantor of world stability.

Promoting “Global Reach, Global Power,” Secretary of the Air Force Rice sought to develop a strategic framework for the Air Force as a whole. He emphasized air power’s inherent strengths—speed, range, flexibility, precision, and lethality. He foresaw

an Air Force that rapidly could span the globe on short notice to extend U.S. influence or achieve political objectives. Not only did the Gulf War further that goal, but it also established a precedent that an Air Force secretary could become heavily involved in determining the policies and methods the Air Force would use to fight a war. Meanwhile, General McPeak responded to the downsizing mandated by Congress and the administration of President Bill Clinton by setting out to reorganize the Air Force. In addition to a major command restructuring, he experimented with different wing-level organizational concepts, including the composite wing and the objective wing. McPeak stressed the heritage of the Air Force in determining which units would be retained and which would be cut.

McPeak’s successors, Gen. Ronald R. Fogleman and Gen. Michael E. Ryan, fine-tuned his process: Fogleman supported a “Global Engagement” long-range plan and a “core values campaign”; Ryan encouraged an “Air Expeditionary Force” (AEF) capable of rapid deployment and ready to meet any global challenge. He envisioned ten AEFs, each deployed for ninety days every fifteen months with two AEFs on call at all times, but Congress did not provide the sustained funding that his plan required. As the twentieth century drew to a close, the USAF definitely was a smaller force, but Congress—the engine for change—seemed to believe that the Air Force had been sufficiently downsized.

SECRETARIES OF THE AIR FORCE

W. Stuart Symington

September 18, 1947–April 24, 1950

W. Stuart Symington

September 18, 1947–April 24, 1950



Portrait by Alfred H. Jonniaux



W STUART SYMINGTON was born in Amherst, Massachusetts, on June 26, 1901. After serving as a first lieutenant in the U.S. Army in World War I, he went to Yale University and graduated with a bachelor of arts degree in 1923. The following year he married Evelyn Wadsworth, and they eventually had two sons. He entered the business world, engaging in various enterprises and earning a reputation for saving companies from bankruptcy and making them profitable. In 1941, after exercising those skills at the Emerson Electric Company of St. Louis, Missouri, where he had been president and chairman of the board, he was asked by the military services to go to England with a group of aeronautical engineers to study aircraft armament, with particular emphasis on the new British power gun turrets. When he returned to the United States, Symington worked to make Emerson Electric the world's largest manufacturer of airplane armament. Following the advice of his father-in-law, Senator James W. Wadsworth of New York, Symington resigned from Emerson when President Harry S Truman asked him to join the government. In July 1945 he became chairman of the Surplus Property Board and the following October, administrator of the Surplus Property Administration.

In February 1946 Truman selected Symington as assistant secretary of war for air. It was Symington's modus operandi to leave the day-to-day running of the air arm to professional airmen. He believed he could best accomplish his management goals by persuading Congress of the importance of air power, in effect promoting the operational programs devised by uniformed leaders like Gen. Carl Spaatz, who would become the first chief of staff for the soon-to-be created U.S. Air Force. As assistant secretary of war for air and later as the nation's first secretary of the Air Force, Symington showed himself unafraid to confront higher authorities to advance the cause of air power. In addition to assisting the drive for Air Force independence, perhaps his most noteworthy achievement as assistant secretary of war for air was the establishment of a cost-control system within the Army Air Forces.

The National Security Act of July 26, 1947, established the Department of the Air Force, fulfilling the dreams and aspirations cherished for many years by U.S. Army air leaders. On September 18, 1947, the Office of the Secretary of the Air Force was officially activated and Stuart Symington took the oath of office. As he had done when he was assistant secretary of

war for air, Symington continued to represent the Air Force in Congress. He had a knack for keeping in touch with almost every facet of his operation, while avoiding becoming bogged down in details. Symington had the utmost respect for his chiefs of staff, Generals Spaatz and Hoyt S. Vandenberg, and their relationships solidified during his tenure.

On several occasions, Secretary of Defense James Forrestal was so much at odds with the air secretary that he contemplated asking for Symington's resignation. Forrestal basically supported President Truman who, when referring to budget matters, called for cooperation among the services to present a "solid front" to the world on the essential elements undergirding U.S. foreign policy. And on these budgeting issues on which Forrestal wanted solidarity Symington dissented.

The air secretary's views again diverged from Forrestal's on the question of the seventy-group Air Force program, the minimum force size that airmen considered adequate for national security. Forrestal wanted and supported only a fifty-five-group program and insisted that a strong Air Force by itself "could not ensure peace or gain victory in war." But Symington believed that even a seventy-group program would provide only a means of survival against an initial enemy onslaught; it would not provide the United States with the means to win a war. He further emphasized that the seventy-group program was a peacetime program, not a war-strength Air Force. That the Air Force did not reach seventy groups during Symington's tenure was one of his greatest disappointments.

Symington's final year in office was dominated by the B-36 controversy, an issue that shook the new Air Force organization to its roots. Not only on the line were the secretary's integrity and career and the reputation of prominent Air Force generals, but the future roles and missions of the Air Force as well.

When Secretary of Defense Louis Johnson canceled the Navy's supercarrier, the USS *United States*, on April 23, 1949, the Air Force's huge long-range bomber, the B-36, became the object of Navy criticism. Detractors questioned the plane's capacity to perform its mission at the range, speed, and altitude the Air Force claimed. Attacks against the aircraft culminated on May 26, 1949, when Rep. James E. Van Zandt told Congress that he demanded answers to specific questions about the B-36, which were based on statements he had read in an anonymous document.

In January 1950 the final report of the House Investigative Committee declared the Air Force's B-36 procurement record clean and stated that there was not a "scintilla" of evidence to support the charges, reports, rumors, and innuendoes, alleging irregularities or improprieties in the procurement process. The committee wanted it made known that Symington, the leaders of the Air Force, and Secretary of Defense Johnson had survived the inquiry with "unblemished, impeccable reputations."

With the B-36 investigation completed, Symington shifted his focus to other issues and soon became disgruntled with the Air Force's lack of funding. He thought that the Air Force

budget had been cut excessively, especially after Truman's September 1949 announcement that the Soviets had detonated an atomic device. The secretary doubted that the Air Force could perform in peacetime—and certainly not in war. He found it difficult to accept increased responsibilities for the Air Force without the means to do the job. Thus, after a four-year struggle to gain respect for the Air Force and to cement its status as an independent service, Symington resigned. He was confident he had built a sound management organization in the Office of the Secretary of the Air Force and believed he had moved air power in the proper direction by “stressing modernity over tradition.”

Symington was equally certain that the Air Force had overcome many problems during his four years of leadership. It had become an equal member of the national defense team, had recovered substantially from the effects of postwar demobilization, and had made a good start toward “becoming that Air Force essential to our security in this air-atomic age.” He attributed those accomplishments to the loyal efforts of Air Force personnel, working in cooperation with the other services, government agencies, Congress, and the U.S. public.

Although he resigned as air secretary, Symington told the president that he was willing to accept another position, and so he stayed with the Truman administration as chairman of the National Security Resources Board and administrator of the Reconstruction Finance Corporation. In 1952 Symington won election as a United States senator from Missouri and subsequently distinguished himself during four terms in Congress.

Stuart Symington was a leader that the Air Force needed during its infancy, and there is no doubt that his excellent leadership qualities greatly benefited the new Air Force. But he also had an inestimable advantage over any Air Force secretary who followed him—he had power. Indeed, the National Security Act of 1947 provided the air secretary as well as the other service secretaries a seat on the National Security Council, a body that included the president and the secretary of defense. Although not an official cabinet member, the air secretary had direct access to President Truman to whom the views of the Air Force could be expressed.

Symington endured the tightfisted maneuverings of an administration whose budget constraints soured any hope of securing a seventy-group Air Force during his tenure. Shortly after he left office, however, the issue became moot. When the Korean War began in June 1950, federal coffers opened again, and an austerity-minded administration and Congress pursued instead a how-much-do-you-need policy. In spite of the paucity of funds in 1947–48, Symington managed to distribute enough Air Force contracts to keep the U.S. aviation industry alive. Balancing scarce funding with building a modern force and the research and development facilities to keep it going was a creditable achievement.

After he left the Senate, Symington became vice chairman and a director of First American Bankshares, in Washington, D.C. Two years after the death of his first wife, he married Ann Hemingway Watson on June 14, 1978. He died at his home in New Canaan, Connecticut, on December 14, 1988, at age eighty-seven.

Thomas K. Finletter

April 24, 1950–January 20, 1953

Thomas K. Finletter

April 24, 1950–January 20, 1953



Portrait by Albert K. Murray



THOMAS K. FINLETTER was born into a prominent Philadelphia, Pennsylvania, family on November 11, 1893. Educated at the Episcopal Academy in Philadelphia, he received a bachelor of arts degree from the University of Pennsylvania in 1915. After two years of service as an army captain, which included a stint in France with the 312th Field Artillery, he returned to the same institution and earned a bachelor of laws degree in 1920. While in France he had met Gretchen Blaine Damrosch, the daughter of orchestra conductor Walter Damrosch and a granddaughter of James G. Blaine, who had been secretary of state under President Benjamin Harrison. They were married on July 17, 1920. They had two daughters.

Following his graduation from law school, Finletter broke with the Republican Party, angered because some of its members had scuttled the League of Nations in the United States Senate. “I had just come back from the Army,” he said, “like many others, terribly concerned with the idea of world peace, . . . and so I became a Democrat, and have been ever since.”

Finletter was admitted to the Pennsylvania Bar in 1920 and to the New York Bar the following year. As a specialist in bankruptcy law, he became a successful partner in the New York law firm of Coudert Brothers from 1926 to 1941. He also lectured at the University of Pennsylvania Law School from 1931 to 1941.

Finletter’s government career began in 1941 with a three-year assignment as a special assistant to Secretary of State Cordell Hull. His responsibilities included planning economic activities in areas liberated by the Allies during World War II, controlling foreign exchange, and overseeing the operations of the Alien Property Custodian. In May 1945 he became a consultant to the U.S. delegation to the United Nations Conference on International Organization, held in San Francisco, California. At that time he moved into the postwar international sphere with his association with the United World Federalists. His most notable public service prior to becoming air secretary occurred between 1947 and 1948 when he chaired the President Harry S Truman’s Air Policy Commission. The commission’s findings, titled *Survival in the Air Age*—but commonly called the *Finletter Report*—cautioned that an understrength Air Force would be unable to defend the United States against atomic attack. It urged that service capability be restored as soon as possible with the help of a viable aircraft industry, and it endorsed

a seventy-group Air Force of 6,869 first-line aircraft, backed by a twenty-seven-group Air National Guard and an adequately equipped thirty-four-group Air Reserve.

After the commission disbanded, Finletter headed the Economic Cooperation Administration's special mission to the United Kingdom until 1949. The mission was charged with managing Marshall Plan aid there. President Truman selected him to succeed Stuart Symington as secretary of the Air Force in April 1950, primarily because of his excellent work on the Air Policy Commission.

While Finletter concentrated on the larger issues of nuclear strategy and U.S. relations with member nations of the North Atlantic Treaty Organization (NATO), the power vacuum within the national military establishment that had existed when James Forrestal was secretary of defense began to diminish as authority became centralized within the Office of the Secretary of Defense. The individual services lost their executive branch status and were redesignated as military departments within the Department of Defense. In addition, the service secretaries lost their membership on the National Security Council, where they previously had sat as equals to the secretary of defense.

After several months in office and in consultation with the Air Staff, Finletter drew up a new set of Air Force objectives largely in response to the Korean War. In descending order of priority, these objectives were to provide the primary air defense of the United States, a strategic retaliatory force, tactical air support, and air transport operations. The long-sought-after goal of a seventy-group Air Force, espoused so intently by Stuart Symington, at last could be realized. It was Finletter's task to evaluate the needs of the Air Force and to present them before a Congress that was willing to fund them. The Korean War, which began in June 1950, forced President Truman and Congress to make significant changes in fiscal policy, from which the Air Force benefited almost immediately. Over the next years, the 48-wing force of June 1950 grew swiftly, at least on paper, in successive steps: from 68 to 95 to 120 to 137 to 143, and finally to 168 wings. The increase in planes, equipment, and personnel proved difficult for the Office of the Secretary of the Air Force and the Air Staff to manage. Adjusting budgets to fit these changing figures and, afterwards, attempting to explain them to Congress required the efforts of both organizations.

During Finletter's tenure, the Air Force Organization Act of 1951 finalized the Air Force's internal structure. Although the act did not resolve problems like those associated with supply, it did clarify the roles and responsibilities of the air secretary and the chief of staff. Finletter believed that the chief of staff should command the three major combat commands: Strategic Air Command, Tactical Air Command, and Air Defense Command. He argued that the direction of operations was a military rather than a civilian function. Under the Air Force Organization Act of 1951, the air secretary remained the nominal head of the Air Force.

Secretary Finletter consistently advocated creating an Air Force strong enough to deter the growing Soviet threat and adaptable enough to react to sudden or limited hostilities. For

reasons beyond than the Korean War, Finletter must be credited with furthering the modernization and growth of the Air Force, which by the end of his tenure was nearly three times the size it had been under Secretary Symington. Finletter accomplished that feat at a time when the Office of the Secretary of Defense was expanding its jurisdiction. By September 1953, seven new assistant secretaries of defense had been added to the civilian hierarchy, with status over the service secretaries.

When his three-year tenure as air secretary ended in 1953, Finletter returned to Coudert Brothers and stayed there until 1961, when he was appointed the U.S. ambassador to NATO, a post he held until 1965. He published several books during his lifetime, including *Principles of Corporate Reorganization* (1938), *The Law of Bankruptcy Reorganization* (1939), *Power and Policy* (1960), and *Interim Report* (1968).

In the meantime, Finletter's interest in New York politics broadened. He was a close associate of W. Averell Harriman and helped Harriman win election as governor of New York in 1954. He joined with Eleanor Roosevelt and former governor Herbert H. Lehman to found the antiorganization reform movement in the Democratic Party.

Following the death of his first wife in December 1969, Finletter married Eileen Wechsler Geist in January 1973. He died on April 24, 1980.

Harold Elstner Talbott

February 4, 1953–August 13, 1955

Harold Elstner Talbott

February 4, 1953–August 13, 1955



Portrait by Gardner Cox



HAROLD ELSTNER TALBOTT was born in Dayton, Ohio, on March 31, 1888. He attended the Hill School in Pottstown, Pennsylvania, and spent two years at Yale University before returning to his father's construction company in 1911. He was vice president and general manager of the H. E. Talbott Company of Dayton, in charge of hydroelectric development and industrial construction. He remained there until 1920 and served simultaneously as vice president and general manager of the Dayton Metal Products Company (1914–20).

Talbott's interest in aviation dated from the early days of the Wright brothers. In 1915 he helped build one of the first wind tunnels for aviation experiments in Dayton. In the spring of 1916, Talbott's father, Colonel Deeds, and Charles Kettering formed the Dayton-Wright Company, a reorganization of the Orville Wright Company. The young Talbott was made president and Orville Wright became vice president and engineer. At the beginning of World War I, the Dayton-Wright Company took over the newly built Delco-Light plant. The expanded plant turned out about four hundred training planes and constructed the two-seat fighter, the DeHaviland-4, later modified to the DeHaviland-9. In October 1918 the plant, which employed twelve thousand people, produced thirty-eight planes per day and manufactured more wartime aircraft overall than any other U.S. plant.

In September 1918 Talbott was commissioned a major in the Air Service of the Signal Corps. His assignment as one of a group of officers in charge of aircraft maintenance and repair in France was canceled by the armistice.

In 1919 the Dayton-Wright Company merged with General Motors, and Talbott spent the next five years as president of the new firm and of Inland Manufacturing Company. In 1925 he moved to New York to become a director of the Chrysler Corporation, of which he was an original investor. Also in 1925 he married Margaret Thayer of Philadelphia, a union that produced four children. From 1931 to 1932 he served as chairman of the board for the North American Aviation Company, and in 1934 he became a director and chairman of the finance committee of Electric-Auto-Lite. In addition, he was a director of the Mead Paper Company for more than thirty years and a director of the Commercial National Bank of New York for more than twenty years.

Talbott had been one of the most active Republican fund-raisers in the presidential campaigns of Wendell L. Willkie in 1940, Thomas E. Dewey in 1948, and Dwight D. Eisenhower in 1952. He was chairman of the Republican national finance committee in 1948 and 1949. He also had been a member of the War Production Board during 1942 and 1943.

Talbott became Secretary of the Air Force on February 4, 1953, during a period when the Korean War had jolted Congress into authorizing additional wings and their supporting infrastructure. Consequently he was able to focus his efforts on the needs of airmen and their families. Thanks to comparatively generous funding, he succeeded in obtaining more military housing than had his predecessors. Combining better housing with pay increases and other needed improvements, he raised the service personnel retention rate by linking enhanced military benefits to reenlistment.

In 1955 Talbott suffered a very serious professional disappointment when he became involved in a conflict of interest that eventually forced his resignation following a congressional investigation of his business activities. Talbott had retained his partnership in the New York investment group, Paul B. Mulligan and Company, a firm he had founded in 1948. He received more than \$132,000 from the firm and had used Air Force stationery and telephones to contact various businesses on behalf of the Mulligan interests, some of which businesses were Air Force contractors. Under pressure, Secretary Talbott relinquished his position in August 1955, maintaining that he wished to spare the President Dwight D. Eisenhower further embarrassment. He died of a cerebral hemorrhage in Palm Beach, Florida, on March 2, 1957.

Donald A. Quarles

August 15, 1955–April 30, 1957

Donald A. Quarles

August 15, 1955–April 30, 1957



Portrait by Germain Green Glidden



DONALD A. QUARLES was born in Van Buren, Arkansas, on July 30, 1894. He graduated from high school at age fifteen, took summer courses at the University of Missouri, and taught school in Van Buren. Like his predecessor, Harold Talbott, Quarles saw service with the U.S. Army during World War I. After he earned a bachelor of arts degree in mathematics and physics from Yale University in 1916, he enlisted in the Rainbow Division and served for two years in France and Germany, attaining the rank of captain in the field artillery.

As an engineer for the Western Electric Company during the early 1920s, he studied theoretical physics at Columbia University. Quarles stayed with the inspection engineering department of Western Electric, which later became the Bell Telephone Laboratories. He was director of the transmission development department and director of apparatus development until he became the company's vice president in 1948. He also was a member and, in 1949, chairman of the Committee on Electronics of the Joint Research and Development Board of the Department of Defense (DOD).

In 1952 he was made president of Sandia Corporation, a Western Electric subsidiary that operated the Sandia Laboratory in Albuquerque, New Mexico, for the Atomic Energy Commission. In September 1953 President Dwight D. Eisenhower appointed him assistant secretary of defense for research and development, and he was subsequently selected by both the secretary of defense and the secretary of commerce to become the first chairman of the reorganized Air Navigation Development Board. In March 1954 the president appointed Quarles to the National Advisory Committee for Aeronautics.

Quarles was the first Air Force secretary with a strong formal or scientific background. He was familiar with the leading scientists, and his excellent scientific knowledge was a solid foundation on which to base a great many of his own decisions. He also was the first Air Force secretary whose views on important issues diverged from those of such prominent airmen as Chief of Staff Gen. Nathan F. Twining and commander of the Strategic Air Command Gen. Curtis E. LeMay. In support of the administration's economy drive, Secretary Quarles urged that research and development funds be cut and that both the long-pursued 137-wing program and newly emphasized missile program be "stretched out." His recommendations caused him

difficulty, not only with his own military leaders, but also with a Democrat-controlled Senate subcommittee investigating U.S. air power, headed by former Secretary of the Air Force Stuart Symington.

Quarles consistently stressed the importance of the United States maintaining qualitative superiority in the face of the USSR's (Union of Soviet Socialist Republics) rapid technological advances. He urged the Air Force to devote adequate attention to research and development because pilots and ground crews had to "have at their disposal the best possible equipment." In company with a strong and sustained research and development program, Quarles supported the continuous strengthening of the service and he recommended that B-52, F-102, and F-104 production proceed without delay.

Quarles devoted his attention to research and development and proved in his twenty-month tenure that a scientist could lead and manage the Air Force competently. Like the first air secretary, Stuart Symington, Quarles was the right man at the right time. The Air Force was developing missiles and supersonic bombers with increasingly complex technologies that Quarles understood. Quarles was unable, however, to confront President Eisenhower the way Symington had confronted President Harry S Truman. The legislative acts of 1949 and 1953 had changed the DOD relationships, and by 1953 the secretary of defense had a deputy and nine assistant secretaries who stood between him and the individual service secretaries. Quarles simply did not have the power that Symington had possessed. He had to support the administration against the wishes of his own airmen and, if he aspired to higher office within the DOD, he had to toe Defense Secretary Charles E. Wilson's line.

Promotion soon followed. Quarles replaced Reuben B. Robertson, Jr., as deputy secretary of defense, and remained in that position until his sudden death from a heart attack on May 8, 1959. President Eisenhower stated at the time that Quarles had devoted his extraordinary talents to the service of his country. His contribution was of inestimable value to the security of the United States and of the entire free world.

Among the many awards Quarles received during his career were honorary doctorates from the University of Arkansas in 1953 and New York University in 1955. He was awarded the USAF Exceptional Service Award in 1957 and the United States Medal of Freedom Award posthumously. Twice married, Quarles was the father of three children.

James Henderson Douglas, Jr.

May 1, 1957–December 10, 1959

James Henderson Douglas, Jr.
May 1, 1957–December 10, 1959



Portrait by George A. Weymouth



JAMES HENDERSON DOUGLAS, JR. was born in Cedar Rapids, Iowa, on March 11, 1899. His family founded the Quaker Oats Company, and he grew up in Lake Forest, Illinois, where his father was a vice president of the company. He was an undergraduate of Princeton University in 1918 when he was commissioned a second lieutenant in the Army. He did not go overseas, and after World War I he returned to Princeton, where he received a bachelor of arts degree in 1920. He then spent a year studying at Corpus Christi College of the University of Cambridge before enrolling in Harvard Law School and earning a degree in 1924. He began his career as a lawyer with the Chicago firm of Winston, Strawn & Shaw the following year but switched to investment banking in 1929 and joined Field, Glore & Company.

In 1932 President Herbert Hoover's secretary of the treasury, Ogden L. Mills, brought Douglas to Washington, D.C. Douglas served as an assistant secretary of the treasury to Mills. He remained at that post under President Theodore Roosevelt, but he grew disenchanted. When he resigned in June 1933, he organized a Citizens' Committee on Monetary Policy that publicly opposed the Roosevelt financial program. He returned to Chicago and became a partner of the law firm of Gardner, Carton & Douglas.

During World War II, Douglas served with the U.S. Army Air Forces in South America, Africa, Europe, and Asia. He rose in rank from major to colonel and became chief of staff of the Air Transport Command. In 1951 he was a member of a National Security Resources Board study group that was assigned to evaluate the adaptability of civil air transport facilities to military uses in time of war or emergency. It was Douglas's connection with the board that brought him to the attention of Secretary of the Air Force Harold Talbott. When asked by Talbott to serve as undersecretary of the Air Force, Douglas hesitated, pleading professional and personal obligations. He had planned to build up his own law firm. His oldest son convinced him to reconsider, however, reminding him that he had referred frequently to his experiences in the Air Force as some of the best in his life. When Talbott asked again, Douglas promised to work in Washington, D.C., for eighteen months. He stayed for eight years—four as undersecretary of the Air Force, two as secretary of the Air Force, and two as deputy secretary of defense.

Secretary of Defense Charles Wilson had asked Douglas to become secretary of the Air Force after Talbott resigned in August 1955, but Douglas declined because of ill health, choosing instead to continue as undersecretary of the Air Force. He recommended Donald Quarles to Secretary Wilson as a suitable replacement for Talbott. During his four years as undersecretary, Douglas attained a record of proven performance and was considered by some to be the unsung workhorse of the Office of the Secretary of the Air Force.

Douglas became air secretary in May 1957. His preference for briefings rather than detailed memoranda endeared him to many on the Air Staff. Douglas's own staff believed that those reporting to him would save themselves the time and effort of developing written reports if they kept a list of important subjects and presented them to him orally when they had the opportunity. This means of operating soon earned Douglas a reputation for a remarkable memory. He was held in great esteem by the chief of staff, Gen. Thomas D. White, who met with him daily.

As air secretary, Douglas testified frequently before Congress. One of his most important Air Force objectives was the completion of the Air Force Academy. He also was watchful of the Advanced Research Projects Agency and the National Aeronautics and Space Administration, making certain that their activities did not infringe on those of the Air Force. He helped the Air Force weather serious personnel cuts demanded by Congress and the administration in early 1957 and stood ready to take advantage for the service of Sputnik's impact on congressional attitudes toward defense funding.

In addition, in 1958 he reaffirmed the 1925 court-martial guilty verdict against the crusader for air power, Brig. Gen. William (Billy) Mitchell. Douglas said it was legally correct for Mitchell to have been found guilty of violating military law for attacking his superiors because they would not accept his views on the military significance of the airplane. Douglas noted, however, that Mitchell's faith in air power had been vindicated and called attention to the posthumous Medal of Honor that Congress had voted for Mitchell in 1946.

As deputy secretary of defense from December 11, 1959, to January 24, 1961, Douglas counseled President Eisenhower on such issues as accepting responsibility for the U-2 espionage flight over the USSR and early U.S. involvement in Southeast Asia. He was awarded the Distinguished Service Medal and in 1960 the Medal of Freedom for his government service.

He returned to his Chicago law practice in 1961. He served as a trustee of the University of Chicago for fifty-five years and held honorary doctorates of law from Princeton University and from Lake Forest and Grinnell Colleges. He was a past president of the Commercial Club and a director of American Airlines, March & McLennan, the Chicago Title and Trust Company, and the Metropolitan Life Insurance Company.

Douglas had four sons by his first marriage to Grace Farwell McGann, who died in 1949. He married Elinor Thompson Donaldson in 1950. He died of cancer on February 24, 1988, at his home in Lake Forest, Illinois. He was eighty-eight years of age.

Dudley Crawford Sharp

December 11, 1959–January 20, 1961

Dudley Crawford Sharp

December 11, 1959–January 20, 1961



Portrait by Lloyd Bowers Embrey



DUDLEY CRAWFORD SHARP was born in Houston, Texas, on March 16, 1905. He attended public and private schools in Houston and completed his pre-college schooling at the Gilman Country School in Baltimore, Maryland. He graduated from Princeton University with a bachelor of science degree in 1927. In January 1929 he married Tina Cleveland, and they had two children.

Immediately following graduation from Princeton, Sharp joined the Mission Manufacturing Company of Houston as its vice president. The firm, which had been started by his oldest brother, specialized in the manufacture of petroleum industry equipment. Sharp founded the Texas Fund Inc., an investment firm; in 1935 he became the company executive vice president and in 1946 its president. During World War II, Sharp served in the U.S. Navy, on sea duty in various capacities as executive officer and commanding officer of antisubmarine warfare vessels. He later served in the Office of Procurement and Materiel with the U.S. Navy in Washington, D.C.

At the end of the war, Sharp returned to Mission Manufacturing as president and chairman of the board. In 1955 President Dwight D. Eisenhower recalled him to Washington to become assistant Air Force secretary for materiel. Although hesitant to leave his business, he accepted the opportunity to serve in government on the condition that he retain his right to criticize other government officials. As assistant secretary he suggested a plan that would have had business leaders taking turns in government assignments so that no one would have to make too great a personal sacrifice in leaving his own business. He was the Air Force representative on the Air Coordinating Committee; the Mutual Defense Assistance Management Council and the Research and Development Policy Council in the Office of the Secretary of Defense; and the Maintenance Facilities Board in the Office of Defense Mobilization. He stayed for three-and-one-half years, resigning in 1959 when labor troubles erupted at his Houston company. He told his government associates not to hesitate to recall him should he be needed.

In August 1959 Sharp returned to the Pentagon to succeed Malcolm A. McIntyre, who was retiring as undersecretary of the Air Force. In December of that year, when Secretary of the Air Force James H. Douglas, Jr., rose to become deputy defense secretary, Sharp assumed

the top Air Force post. His thirteen-month stint as Air Force leader at the end of the Eisenhower administration was far too short to establish precedents for future air secretaries. Despite his lame-duck status he continued the policies of Secretary Douglas and, with his predecessor, advocated that contracts for civil cargo airlift proceed in peacetime to ensure overseas logistical support. While at the Pentagon, Sharp gained a reputation for his work in developing efficient procurement and supply techniques. In the continuing defense debate, he supported President Eisenhower against those who wanted to increase government spending on missiles and bombers.

In January 1960 he returned to Mission Manufacturing, where he remained until he sold the company to TRW in 1976. After his retirement he served as director of the Lighthouse for the Blind, chairman of the local Republican Party, and a board member of the Museum of Natural History and the M. D. Anderson Cancer Hospital. He was also president of the Houston Chamber of Commerce and helped raise money for the Alley Theater, a professional repertory group in that city. The sixth secretary of the Air Force died of cancer on May 17, 1987, in Houston.

Eugene M. Zuckert

January 24, 1961–September 30, 1965

Eugene M. Zuckert

January 24, 1961–September 30, 1965



Portrait by Charles J. Fox



EUGENE M. ZUCKERT was born on November 9, 1911, in New York City. He attended public elementary and high schools in suburban New York, received preparatory education at the Salisbury School, Salisbury, Connecticut, and earned his bachelor of arts degree from Yale University in 1933. Zuckert entered the combined Yale Law School–Harvard Business School course sponsored by William O. Douglas, who later served on the Supreme Court. That course, a pioneer experiment by Yale and Harvard, supplemented legal training with administration to foster an awareness of the business problems of clients. After graduation, Zuckert became a member of both the Connecticut and New York Bars. He later became a member of the Bar in the District of Columbia.

In 1940, following a three-year stint as an attorney for the U.S. Securities and Exchange Commission, he became an instructor in government and business relations at the Harvard Graduate School of Business Administration, and later he became an assistant dean. While at Harvard he also served as a special consultant to the commanding general of the Army Air Forces (AAF) in developing statistical controls. In that capacity he was an instructor in the AAF Statistical Control School at Harvard, which trained more than three thousand Air Force officers, and he served at various AAF bases in the United States on special assignments for the commanding general of the AAF.

In 1944 Zuckert entered the U.S. Navy as a lieutenant (jg) and worked in the Office of the Chief of Naval Operations, where he was assigned to the service's inventory control program. In September 1945 he was released from the Navy to become executive assistant to the administrator, Surplus Property Administration, under W. Stuart Symington. When Symington became assistant secretary of war for air in February 1946, Zuckert became his special assistant.

With the passage of the National Security Act in 1947 and Symington's subsequent appointment as the first secretary of the Air Force, Zuckert took the oath as assistant secretary of the Air Force. His principal duties were in the field of management: supervision of the Air Force's cost control plan, which required sound business administration; management of the statistical control system; and development of organizational policy, civilian and military personnel policies, budgetary policies, and educational and training policies. He helped institute

Symington's program of "Management Control Through Cost Control," an initiative to place the U.S. Air Force on a business-like basis, using accepted industrial practices as a yardstick for establishing Air Force procedures. Zuckert represented the Air Force in the formulation of the FY1950 budget, the first joint Army–Navy–Air Force budget in U.S. history.

The accomplishment that Zuckert considered his most professionally satisfying stemmed from President Harry S Truman's 1948 directive requiring the armed services to abolish segregation. Working with Lt. Gen. Idwal H. Edwards, head of Air Force personnel, Zuckert oversaw implementation of the integration program. In addition, Zuckert served as the Air Force member of the Interservice Committee created by Secretary of Defense James Forrestal to develop a Uniform Code of Military Justice for the Department of Defense.

Remaining in the secretariat after Thomas K. Finletter succeeded Symington as secretary, Zuckert was charged with handling the "highly controversial and vexatious problem of the civilian components, including the reserves and the Air Force National Guard." As Finletter concentrated more on larger issues, such as the North Atlantic Treaty Organization and nuclear weapons development, Zuckert dealt with the daily operations of the office. When he left his position as assistant secretary in February 1952 to become a member of the Atomic Energy Commission (AEC), he left an Air Force cost-control system that had established a new high point in sound business administration within the military establishment, and he had secured a personal reputation as one of the top-flight, younger career officials in government. After a two-year stay at the AEC, Zuckert went into private law practice with an old friend, Coates Lear, in what was primarily an aviation law practice. He also specialized as a consultant in the field of atomic energy. He served as chairman of the board of Nuclear Science & Engineering Corporation in Pittsburgh, Pennsylvania, a firm doing pioneer work in the field of radiation chemistry. He helped organize and was associated with Information for Industry, Inc., which published a Chemical Patents Index and an Electronics Patents Index. He also served as director of AMF Atomics, Ltd. (Canada), and of the atomic energy subsidiary of American Machine & Foundry, Inc. With Arnold Kramish he coauthored the book, *Atomic Energy for Your Business*. He was a member of the Executive Council of the Yale Law School Association and a former trustee of Landon School in Bethesda, Maryland. Zuckert directed the People-to-People Health Foundation, a nonprofit organization that operated the HOPE ship as part of President Eisenhower's People-to-People Program.

In December 1960 Robert S. McNamara, President-elect John F. Kennedy's designee for secretary of defense, recommended to Kennedy that Zuckert be appointed Air Force secretary. Zuckert was nominated and confirmed in January 1961. With nearly six years of Air Force experience, Zuckert was better prepared for and more knowledgeable about the secretariat and its organization than any previous appointee. During his service as secretary, he witnessed the shifting of decision-making powers from the military departments to the Office of the Secretary of Defense, a process that continued throughout the 1950s but culminated under McNamara.

Zuckert was also involved in controversies associated with the B-70, Sky Bolt, and the TFX (later the F-111) weapon systems, and with direct participation in the war in Vietnam. Both he and Air Force Chief of Staff Gen. Thomas D. White opposed the administration's decision to cut the B-70 bomber. Zuckert later admitted that he erred in promoting the bomber because of its increasing vulnerability to enemy defenses.

The TFX was a tactical fighter-bomber designed and built for both the Air Force and the Navy. In negotiations over the development of that weapon, Zuckert supported the administration, which wanted the plane, against the Air Force, which did not. In so doing, he strained his relationship with the Air Force and lost a measure of the confidence it had placed in him. When the Sky Bolt missile was canceled in December 1962, Zuckert and the Air Staff were allied, as they had been during the B-70 debate, against the secretary of defense and the administration. Zuckert often found himself to be the "man in the middle," at times supporting the Air Force against the secretary of defense and the administration. Both the Air Force and the secretary of defense agreed on one of Zuckert's ideas: Project Forecast. That study, initiated in March 1963, was prompted by Zuckert's observation that the Air Force ought to investigate technologies that would have some bearing on future aerospace military operations.

Shortly after Zuckert left office in September 1965, the Air Force instituted the Zuckert Management Award, which is given annually on September 30 to a general officer or high-level civilian for "outstanding management performance." The award perpetuates Secretary Zuckert's commitment to sound and effective management within the Air Force. Zuckert himself attended every awards ceremony through 1998.

After several months as a sole practitioner, Zuckert joined Scoutt & Rasenberger, the successor to the aviation law firm he had left in 1961. Zuckert's name soon preceded those of the firm's two partners. Until his retirement in 1988, Zuckert practiced law, did consulting, and was active in pursuing his long-standing interest in corporate governance. Over the years he served as a director of several small, technically oriented companies. In 1967 he became a member of the boards of Washington Gas Light Company and Martin Marietta Corporation. On June 5, 2000, Eugene Zuckert died of pneumonia complicated by a heart ailment at the age of eighty-eight.

Harold Brown

October 1, 1965–February 14, 1969

Harold Brown

October 1, 1965–February 14, 1969



Portrait by Samuel Edmund Oppenheim



HAROLD BROWN was born in New York City on September 19, 1927. He received a bachelor of arts degree in 1945, a master of arts degree in 1946, and a doctorate in physics in 1949 at the age of twenty-one, all from Columbia University. In 1964 the Stevens Institute of Technology awarded him an honorary doctorate in engineering. In 1967 he was elected a member of the National Academy of Engineering.

Between 1947 and 1952 Brown lectured in physics and was a member of the scientific faculty at Columbia University. He lectured in physics at Stevens Institute of Technology, spent a year in postdoctoral research at Columbia, and joined the University of California Radiation Laboratory at Berkeley as a research scientist in 1950. In 1952, when the Livermore, California, site of the E. O. Lawrence Radiation Laboratory was established, Brown joined the staff there and became the director in July 1960. In 1953 he married Colene Dunning McDowell and they had two daughters.

From 1956 to 1957 Brown was a consultant to the Air Force Scientific Advisory Board and served as a member of the board from 1958 to 1961. From 1956 to 1958 he also was a member of the Polaris Steering Committee. From November 1958 to February 1959 Brown was senior scientific advisor to the U.S. Delegation to the Conference on Discontinuance of Nuclear Weapons Tests. From 1958 to 1961 he was a member of the Scientific Advisory Committee on Ballistic Missiles to the secretary of defense.

In 1961, at age thirty-four, Brown was listed as one of the ten outstanding young men of the year by the U.S. Junior Chamber of Commerce and received the Navy Distinguished Civilian Service Award. In 1963 he was awarded the Columbia University Medal of Excellence.

Before he became secretary of the Air Force, Brown served as director of defense research and engineering for the Department of Defense from May 3, 1961, to September 30, 1965. He was considered one of Secretary of Defense Robert S. McNamara's "whiz kids."

When Brown became secretary of the Air Force in late 1965, at age thirty-eight, the buildup of ground and air forces in Southeast Asia was still underway. His immediate problem was one of deployment, base structure, procurement of bombs and other ordnance, and training. The more fundamental problem for the secretary and for the Air Force was to determine

how air power, in general, could be applied to a limited conflict in a remote area in an unconventional war. That issue would remain basic throughout Brown's tenure and beyond.

As air secretary, Brown was one of the top defense planners in the Johnson administration and had a reputation for expertise in both armament and disarmament matters. Shortly after leaving office, Brown conceded that McNamara's initiative to develop the F-111B aircraft to perform somewhat different missions for the Air Force and the Navy might have been a \$200-million mistake. Secretary Brown oversaw a great many technical changes and improvements, especially in the areas of ballistic missiles, space technology, and antiballistic missile systems. The Vietnam War refocused tactical systems from antiguerrilla actions to large-scale conventional wars. Other examples of advancements during Brown's tenure involved target acquisition, rapid processing of data for intelligence purposes, successful use of air-to-air missiles in air-to-air combat, and electronic countermeasures. The war occupied less than half of Brown's time. He maintained that one lesson McNamara, he, and others who were analytically inclined ought to have discerned from that war was that "analysis is only moderately applicable to some of the more vital questions in a conventional or subconventional war." Questions dealing with political motivation, he found, are not necessarily well suited to analytical study.

Brown left office when the Nixon administration took power in 1969. That year he became president of the California Institute of Technology (Caltech) and subsequently guided the campus through a difficult period, which included controversies over U.S. involvement in Vietnam, major cuts in aid to higher education, recession, and rising inflation. During his tenure there, women were admitted for the first time as undergraduates and equal opportunity programs were implemented. During Brown's term, the Environmental Quality Laboratory at Caltech was established, computing facilities were developed, and the social science program was expanded. From 1969 to 1975 Brown served as a delegate to the Strategic Arms Limitation Treaty talks. He left Caltech in 1977 to return to the Pentagon, this time as secretary of defense under President Jimmy Carter.

While serving as defense secretary, Brown launched a comprehensive review of the defense organization that eventually brought significant change. With regard to strategic planning, he shared many of the same concerns as his Republican predecessors—the need to upgrade U.S. military forces and improve collective security arrangements—but had a stronger commitment to arms control. He adhered to the principle of "essential equivalence" in nuclear competition with the USSR. He considered it essential to maintain the triad of intercontinental ballistic missiles, sea-launched ballistic missiles, and strategic bombers. Some of the Carter administration's most important decisions on weapons systems reflected Brown's commitment. Although he decided not to produce the B-1 bomber, he did recommend upgrading existing B-52s and equipping them with air-launched cruise missiles, and he gave the go-ahead for developing a "stealth" technology.

Arms control formed an integral part of Brown's national security policy. He staunchly supported the June 1979 Strategic Arms Limitation Treaty (SALT II) between the United States and the USSR, and he was the administration's leading spokesman in urging the U.S. Senate to approve it.

Brown left office on January 20, 1981, following President Carter's unsuccessful bid for reelection. After leaving the Pentagon, he remained in Washington, D.C., and joined the Johns Hopkins University School of Advanced International Studies as a distinguished visiting professor and served as chair of the university's Foreign Policy Institute from 1984 to 1992. He continued to speak and write widely on national security issues, and in 1983 he published *Thinking about National Security: Defense and Foreign Policy in a Dangerous World*. In later years Brown was affiliated with research organizations and served on the boards of a number of corporations, including AMAX Mining Corporation, CBS, IBM, Philip Morris, Cummins Engine Co., and Mattel. Beginning in 1992, he served as counselor for the Center for Strategic and International Studies in Washington, D.C.

Robert C. Seamans, Jr.

February 15, 1969–May 14, 1973

Robert C. Seamans, Jr.

February 15, 1969–May 14, 1973



Portrait by Bruno Beran



ROBERT C. SEAMANS, JR., was born on October 30, 1918, in Salem, Massachusetts. After attending the Lenox School in Lenox, Massachusetts, he earned a bachelor of science degree in engineering at Harvard University in 1939, a master of science degree in aeronautics at Massachusetts Institute of Technology (MIT) in 1942, and a doctor of science degree in instrumentation from MIT in 1951. Subsequently he received honorary doctor of science degrees from Rollins College (1962), New York University (1967), Norwich Academy (1971), Notre Dame (1974), Rensselaer Polytechnic Institute (RPI) (1974), University of Wyoming (1975), George Washington University (1975), Lehigh University (1976), Thomas College (1980), and Curry College (1982). In 1942 Seamans married the former Eugenia A. Merrill and they had five children.

From 1941 to 1955 Seamans held teaching and project management positions at MIT, where he worked on aeronautical problems, including instrumentation and the control of airplanes and missiles. From 1948 to 1959, he served on technical committees of the National Air and Space Administration's (NASA) predecessor organization, the National Advisory Committee for Aeronautics. Seamans served as a consultant to the Scientific Advisory Board of the Air Force from 1957 to 1959, as a member of the board from 1959 to 1962, and as an associate advisor from 1962 to 1967.

He joined the Radio Corporation of America (RCA) in 1955 as manager of the Airborne Systems Laboratory and chief systems engineer of the Airborne Systems Department in Boston, Massachusetts. In 1958 he became chief engineer of the Missile Electronics and Controls Division at RCA in Burlington, Massachusetts.

In 1960 Seamans joined NASA as associate administrator with responsibilities for research and development programs, field laboratories, assembling and launching facilities, and a worldwide network of tracking stations. From December 1965 until January 1968 he was deputy administrator of NASA, retaining many of the management responsibilities of his prior position. Much of the development of the space program, from completion of Project Mercury through Projects Gemini and Apollo, was approved and put into effect during his tenure.

While at NASA Seamans also worked closely with the Department of Defense (DOD) in research and engineering programs and served as cochairman of the Astronautics Coordinating

Board. Through those associations, NASA was kept aware of DOD's military developments and technical needs, and Seamans was able to advise DOD of NASA activities that were applicable to national security.

In January 1968 Seamans resigned from NASA to become a visiting professor at MIT. In July 1968 he was appointed to the Jerome Clarke Hunsaker professorship, an MIT-endowed visiting professorship in the Department of Aeronautics and Astronautics, named in honor of the founder of the Aeronautical Engineering Department. During that period at MIT, Seamans also served as a consultant to the administrator of NASA.

Having received little forewarning that he would be selected as air secretary, he sold his house in Washington, D.C., a few days prior to accepting the position. With his confirmation as secretary of the Air Force in 1969 he became a member of a burgeoning elite of government and industry—scientist-administrators.

At the beginning of his term as air secretary, Seamans saw that the Air Force needed to modernize, and at the least expense possible. He stressed the need for more efficient management controls. The Air Force had to phase in programs in such a way that excessive peak demands on the budget were avoided. Because it was impossible to predict a future threat or the technological innovations that would be required in the foreseeable future, Seamans argued that the Air Force should provide development options from which to select necessary procurement programs.

After two years in office, Seamans, who had planned to stay for only two years, informed Secretary of Defense Melvin Laird that he wished to extend his tour to complete or initiate several projects. He wanted to place the C-5 contract with Lockheed on a sound basis; resolve the F-111 cost and technical difficulties; move new programs such as the F-15, B-1, AWACS, A-X, and F-5E to the point where the Air Force could be confident in its policy of "fly before buy"; and improve military and civilian personnel policies. His willingness to stay with the Department of Defense depended on the Nixon administration's determination to terminate U.S. activities in Southeast Asia. Seamans's decision to stay on delighted Laird, who praised the Air Force secretary for his progress in modernizing forces, managing key weapons systems programs, planning for personnel requirements, and undertaking important domestic action programs. Laird also credited Seamans for his meaningful role in working toward the administration's policy of Vietnamization.

In May 1973, at the time of Seamans's resignation to become president of the National Academy of Engineering, President Richard M. Nixon said that his administration was most fortunate to have had a person of Seamans's leadership and managerial ability directing the development of sophisticated new aircraft and helping to improve U.S. missile systems. Nixon credited Seamans with keeping the Air Force modernization program costs so very close to projected estimates and for creating an environment in which people serving in the Air Force believed they could realize their potential.

Seamans served as president of the National Academy of Engineering until December 1974, when he became the first administrator of the new Energy Research and Development Administration. He returned to MIT in 1977 to become the dean of its School of Engineering in 1978. In 1981 he was elected chairman of the board of the Aerospace Corporation. From 1977 to 1984 he was the Henry Luce professor of environment and public policy at MIT, where he remained as a senior lecturer in aeronautics and astronautics. In 1996 Seamans published his autobiography, *Aiming at Targets*.

John L. McLucas

July 19, 1973–November 12, 1975

John L. McLucas

July 19, 1973–November 12, 1975



Portrait by Everett Raymond Kinstler



JOHN L. McLUCAS was born on August 22, 1920, in Fayetteville, North Carolina. He attended schools in South Carolina and graduated in 1937 from Latta High School. Returning to North Carolina, he graduated from Davidson College in 1941 with a bachelor of science degree in physics. In 1943 he received a master of science degree in physics from Tulane University and in 1950 a doctorate in physics with a minor in electrical engineering from Pennsylvania State University. During World War II, McLucas served as an officer in the U.S. Navy, including a two-year stint at sea in the Pacific theater as a radar and operations officer.

In 1950 he joined the electronics firm of Haller, Raymond, and Brown, Inc., as its vice president and technical director. There he was responsible for all technical work of the company, including forward planning, supervision of technical personnel, proposal preparation, research, development, and manufacturing. When the firm merged with the Singer Company in 1958 to form a subsidiary, HRB-Singer, Inc., McLucas became its president. The new ancillary company specialized in military electronic systems. In the twelve years he was affiliated with HRB-Singer, McLucas increased the number of engineers from ten in 1950 to several hundred in 1962.

In 1962 he went to work in the Pentagon as a deputy to Harold Brown, the director of Defense Research and Engineering. It was McLucas's job to oversee development of tactical systems of the three services and the Advanced Research Projects Agency. As head of an office called Tactical Warfare, McLucas spent much of his time with Air Force secretariat officials—Secretary of the Air Force Eugene Zuckert and Undersecretaries of the Air Force Brockway McMillan and Joseph Charyk—and their military counterparts—Chief of Staff Gen. Curtis LeMay, and Generals Jim Ferguson, “Spike” Momyer, and “Bennie” Schriever. In addition, his job entailed liaison with principal agencies of the military departments and laboratories, daily contacts with industry, and visits to industrial and military installations. Frequent contacts with press, other government agencies, and groups like the president's Scientific Advisory Committee and the Defense Science Board also marked his schedule.

In July 1964 McLucas went to Paris to work for the North Atlantic Treaty Organization (NATO) as assistant secretary general for scientific affairs and as chair of the NATO science

committee and of the defense research directors' committee. He was responsible to the NATO secretary general for the administration of NATO programs in the fields of pure science and defense science. One of his jobs was to head a committee of defense directors from all NATO countries who were dealing with the development of common weapons for use by the NATO allies in case of war in Europe. He also maintained contacts with ministries of foreign affairs, science, and defense, and with NATO delegations to develop common points of view on science and defense matters.

In 1966 he returned to the United States to become president and chief executive officer of the MITRE Corporation in Bedford, Massachusetts. MITRE, a nonprofit corporation, that was organized by the Massachusetts Institute of Technology at the request of the United States Air Force (USAF) in 1958 to assist in procuring and installing the Semi-Automatic Ground Environment defense system. In 1969 McLucas oversaw a MITRE budget of \$42 million, of which 65 percent was affiliated with the Air Force. While at MITRE McLucas also chaired the USAF Scientific Advisory Board ad hoc panel on infiltration interdiction in 1967–68; the Defense Science Board summer study on tactical aircraft in the summer of 1968; and the Defense Science Board Task Force on Management of Military Research and Development in 1968–69.

In 1969 Secretary of the Air Force Robert C. Seamans, Jr., asked McLucas to become his undersecretary. McLucas took the job not only because he respected Seamans as an exceptional engineer and manager, but also because he considered Seamans to be a “decent human being” and a person he was delighted to call his friend. Seamans wanted a true deputy, someone who would take charge and make decisions in his absence. In this work as undersecretary, McLucas concentrated on electronics fields, such as satellite communications, fire control, and electronic warfare, whereas Seamans served as the lead on such weapon systems as new airplanes. As undersecretary of the Air Force, McLucas also headed the National Reconnaissance Office. He supported the Nixon administration's policy of reducing U.S. involvement in the war in Southeast Asia, which moved too slowly for the public's taste. Seamans and McLucas wrestled with the problems of maintaining an effective military force when the military was unpopular at home and Soviet power and influence were expanding abroad. It was a time of decreasing military budgets, rapidly shrinking levels of manpower, and major reductions in the active forces. Procurements shrank to as little as 10 percent of the number of airplanes bought during the big defense buildup.

McLucas became secretary of the Air Force in July 1973, just after the United States had left Vietnam. He perceived his job as salvaging the service from the wreckage caused by the loss of equipment and a dampened morale, and dealing with the realities of what the Air Force had always believed—if there was a job to be done, the Air Force could do it. McLucas felt his task was to rekindle the esprit de corps and simultaneously start a few new projects. The YF-16/YF-17 flyoff and the Air Force selection and subsequent sale to NATO of the F-16

were highlights of his tenure. He also strongly supported prototyping to avoid the huge blunders that were made with the C-5A and the FB-111. Fortunately for him, Secretary of Defense Melvin Laird, Undersecretary of Defense David Packard, and Bob Seamans shared his views.

McLucas had enjoyed a good relationship with Melvin Laird and had the utmost respect for his management practices, particularly his penchant for holding weekly meetings with the three service secretaries, during which he encouraged open discussions and reported about his activities on the Hill. Such was not the management style of Laird's successors Elliot L. Richardson and James R. Schlesinger. During his six-year tenure, McLucas' aggressive support of weapons systems' modernization produced a new array of aircraft—the F-15, AWACS (E-3A), A-10, F-5E, and F-16.

After leaving the Air Force in November 1975, McLucas became the administrator of the Federal Aviation Administration, where he remained for two years. From 1977 to 1985 he served as executive vice president of COMSAT, president of COMSAT General, and president of COMSAT World Systems.

McLucas has been active on the boards of directors of private and pro bono organizations and as a consultant to several similar groups. In 1991 he authored *Space Commerce*, which was published by Harvard University Press.

Thomas C. Reed

January 2, 1976–April 5, 1977

Thomas C. Reed

January 2, 1976–April 5, 1977



Portrait by Maxine McCaffrey



THOMAS C. REED was the first secretary of the Air Force to have *served* in the United States Air Force. Born in New York City on March 1, 1934, he earned a bachelor of science degree in mechanical engineering from Cornell University in 1956. As a college student he enrolled in the university's Air Force Reserve Officer Training Corps program and was the highest-ranking officer, cadet colonel, during his senior year. He was designated a distinguished military graduate and received a commission as a second lieutenant in the Air Force when he graduated. Reed began active duty with the Air Force in November 1956, serving until 1959 as technical project officer for the Minuteman reentry vehicle system with the Air Force's Ballistic Missile Division. While on that assignment, he attended the University of Southern California during off-duty hours and earned a master of science degree in electrical engineering.

In 1959 Reed was assigned to the Lawrence Radiation Laboratory of the University of California, where he engaged in thermonuclear weapons physics. When he was released from Air Force active duty in May 1961, he rejoined the Lawrence Radiation Laboratory as a civilian for the 1962 reentry vehicle system test series and remained there as a consultant until 1967.

In 1962 Reed organized Supercon Ltd. in Houston, Texas, as its managing partner. The company developed and produced alloys that served as superconductors. While he maintained an interest in Supercon, Reed organized the Quaker Hill Development Corporation at San Rafael, California, in 1965 and served at various times as its treasurer, president, and chairman. Quaker Hill had agricultural, recreational, and construction projects in California and Colorado. Reed was active in Republican politics and served as a delegate to the Republican National Conventions of 1968 and 1972 and as a member of the Republican National Committee for the state of California from 1968 to 1972.

In 1973 he was asked by Secretary of Defense James R. Schlesinger and Deputy Secretary of Defense William P. Clements to work in various capacities in the Department of Defense. There he served as a procurement specialist and a headhunter until those two men asked him to become director of telecommunications and command and control systems in

February 1974. In November 1975 President Gerald R. Ford selected Reed to become secretary of the Air Force, and he was sworn in two months later.

Secretary Reed saw his role as one of training, maintaining, and equipping the forces that the president and the secretary of defense required. In addition, Reed believed the service secretary had to run interference on high-visibility issues that were not necessarily critical for the secretary of defense. During Reed's brief tenure he kept the F-16 foreign partnership from becoming hopelessly entangled, defended the F-15 from raids for money, kept the A-10 on track, and generally protected those programs from budget attacks. He had the persistence to keep programs alive during the austere period that followed the Vietnam War.

After leaving office in 1977, he returned to private business in California as chief executive officer of the River Oaks Agricorp in Healdsburg and to the Quaker Hill Development Corporation in San Rafael. He was a member of the Defense Science Board from 1977 to 1983 and of the Scientific Advisory Group of the U.S. Strategic Air Command from 1981 to 1983. In 1982 he returned to government for a year as a special assistant for national security affairs to President Ronald Reagan.

John C. Stetson

April 6, 1977–May 18, 1979

John C. Stetson

April 6, 1977–May 18, 1979



JOHN C. STETSON was born on September 6, 1920, in Chicago, Illinois. He graduated from the Massachusetts Institute of Technology in 1943 with a bachelor of science degree in aeronautical engineering and did postgraduate work at Northwestern University School of Business from 1946 to 1948. He was employed as a structural engineer for Douglas Aircraft Company during World War II before being commissioned in the U.S. Navy, where he served as a communications officer until the end of the war. After he returned to civilian life and completed his studies, he resumed an engineering career in the Chicago area. He served as project manager for Foote Brothers Gear and Machine Company from 1949 to 1951. From 1951 to 1965 he was a member of and then a partner in the consulting firm of Booz, Allen and Hamilton, responsible for a number of assignments with aircraft companies and major oil companies operating in the Middle East. In January 1946 Stetson married Gale McDowell and they had three children.

In 1963 Stetson went to Houston, Texas, to become president of the publishing division of the *Houston Post* Company. In 1970 he returned to Chicago to become president of the A. B. Dick Company, manufacturer and international distributor of business machines, a position he held until he became the twelfth secretary of the Air Force in 1977.

As President Jimmy Carter's new air secretary, Stetson realized from the start of his tenure that the austerity mood of the administration and the Congress would continue to affect Air Force budgets. He recognized the need to seek out additional avenues, original ideas, and enlightened management practices to enhance Air Force readiness and combat capability and further streamline the service's business methods. He envisioned an era of limited resources during which there was little expectation that the USSR would diminish its efforts, at military technological expansion. Therefore, he believed that the Air Force would have to operate more economically and efficiently. A year into his term he concluded that U.S. taxpayers ought to be assured that the Air Force was squeezing every ounce of capability from its allotted resources: the Air Force had cut its manpower, reduced the number of major installations, and used the savings to reinforce its combat units and to develop new aircraft systems.

When Secretary Stetson left office in June 1979 to return to his business activities in the private sector, President Carter commended his managerial expertise and genuine concern for

Air Force personnel and their families. Carter also believed that Stetson had done much to effect significant improvements in the nation's air posture to meet commitments as a member of the North Atlantic Treaty Organization.

In addition to serving as president of his own company, J. C. Stetson Inc., Stetson became a director of several companies, including the Kemper Corporation; NIBCO, Inc.; Madison-Kipp Corporation; Helene Curtis; and Chicago Tube and Iron.

Hans M. Mark

July 26, 1979–February 9, 1981

Hans M. Mark

July 26, 1979–February 9, 1981



Portrait by Lynn Buckham



HANS M. MARK was born in Mannheim, Germany, on June 17, 1929. He immigrated with his parents to the United States in 1940 and became a naturalized citizen in 1945. He earned a bachelor of arts degree in physics from the University of California at Berkeley in 1951 and a doctorate in the same field from the Massachusetts Institute of Technology (MIT) in 1954. His father, Herman, a world-renowned chemist widely considered to be the father of polymer chemistry, inspired Mark's interest in both physics and nuclear engineering.

Prior to his first academic appointment as a lecturer in physics at Boston University in 1952, Mark married Marion G. Thorpe. They had two children. Over the years Mark held several academic positions at MIT, and in the University of California system between 1956 and 1969. From 1979 to 1984 he was a consulting professor of engineering at Stanford University. While at MIT he served as a research associate and acting head of the Neutron Physics Group, Laboratory for Nuclear Science from 1954 to 1955. At the University of California he served as a research physicist at the Berkeley campus and then at the university's Lawrence Radiation Research Laboratory in Livermore. From 1960 to 1964 he headed the Lawrence Radiation Research Laboratory Experimental Physics Division, and from 1964 to 1969 he served as chair of the Department of Nuclear Engineering at the University of California at Berkeley and administrator of the Berkeley Research Reactor.

Spanning more than three decades, his academic career was distinguished by many achievements. His pioneering investigation of x-rays emitted from stars led later to the identification of certain objects as black holes. He also has led the engineering development of a number of spacecraft and experimental aircraft.

Mark served as a consultant for the Institute for Defense Analyses from 1958 to 1961 and for the National Science Foundation from 1966 to 1969. He also served on the U.S. Air Force Scientific Advisory Board from 1969 to 1976 and on the President's Advisory Group on Science and Technology from 1975 to 1976, and he became a member of the Defense Science Board in 1975. He was director of the National Aeronautics and Space Administration's (NASA's) Ames Research Center from 1969 until his appointment as undersecretary of the Air Force in June 1977. At the Ames Center he coordinated and carried out research in areas

ranging from fundamental aerodynamics to spacecraft development and to the human factors that affect space flight.

As acting secretary of the Air Force in May 1979, Mark listed three major responsibilities as the dominant Air Force priorities for the near term. Modernization of strategic deterrent forces led the list. He pointed out that the aging bomber force had the thirty-year-old B-52 bomber as its first-line heavy bomber and that the Minutemen III missile force was nearly fifteen years old. He saw the need for an immediate development of new first-line weapons. His second priority was the enhancement of airlift capability, which he contended had to be both modernized and increased if “we are to meet our responsibilities around the world.” The third area of responsibility was in space, especially in the area of strategic reconnaissance, and he predicted that space-based devices would provide the first warning of future strategic attack. Mark maintained those priorities throughout his tenure as secretary of the Air Force, and he also emphasized better pay and benefits for Air Force personnel. In 1979 the Air Force awarded him the Exceptional Civilian Service award, and two years later the Department of Defense awarded him the Distinguished Public Service Medal.

After leaving the secretariat, Mark was appointed by President Ronald Reagan to serve as deputy administrator of NASA, where he remained until he took the post of chancellor in the University of Texas system in 1984. In that position he headed one of the nation’s largest university systems with an enrollment in excess of 150,000. After he left his job as chancellor in 1992, he remained at the University of Texas as a professor of aerospace engineering and engineering mechanics. In addition, he held the John J. McKetta Centennial Energy Chair in Engineering from 1992 to 1998. He also had been associated with the university’s Institute for Advanced Technology as a senior research engineer since 1990, and in that capacity he worked on advanced weapons systems for the U.S. Army. During his career, Mark authored and coauthored more than 150 scholarly articles and many books, including *The Space Station: A Personal Journey*, *The Management of Research Institutions*, and *In Search of the Fulcrum*. In July 1998 Mark became the director of Defense Research and Engineering, serving as the chief technical advisor to the secretary of defense and the undersecretary of defense for acquisition and technology on defense research, development, testing, and evaluation. In addition, he had management oversight for the Defense Advanced Research Projects Agency (DARPA) and the Ballistic Missile Defense Organization.

Verne Orr

February 9, 1981–November 30, 1985

Verne Orr

February 9, 1981–November 30, 1985



Portrait by Everett Raymond Kinstler



VERNE ORR was born on November 12, 1916, in Des Moines, Iowa. He grew up in the Midwest and moved to California with his family at about the time he entered high school. He graduated with a bachelor of arts degree from Pomona College in 1937 and two years later earned a master of arts degree in business administration from the Stanford University Graduate School of Business.

At the start of World War II, Orr was a trainee at Bullock's department store in Los Angeles. Called to active duty in April 1942, he entered service as an ensign in the Supply Corps of the United States Naval Reserve. During the war, he served in the United States and in the Pacific theater. He was released from active duty as a lieutenant in November 1945 and honorably discharged from the Naval Reserve as a lieutenant commander in 1951.

Orr became a partner in his father's Chrysler dealership in Pasadena, California, and remained there until 1960, when he began a two-year affiliation with a family investment business. From 1963 to 1966 he was president of Investors Savings and Loan in Pasadena. He married Joan Perk of Des Moines and they had two children.

Governor Ronald Reagan of California invited Orr to serve as the state's director of motor vehicles, a position Orr held until 1969. In that capacity, he oversaw a department with more than six thousand employees. He served briefly as the state's director of general services and in January 1970 began a five-year term as California's director of finance.

From 1975 to 1980 Orr taught government finance courses at the University of Southern California Graduate School of Public Administration. In 1977 he established a small real estate partnership with his son. He served on Reagan's presidential campaign committee and was deputy director of the office of the president-elect during the autumn 1980 transition period. He also served as comptroller for the Reagan presidential campaign and as deputy director and comptroller for the Reagan-Bush campaign.

Before becoming secretary of the Air Force, Orr was involved in many civic activities. He served as president of the Pasadena Merchants Association, the Kiwanis Club of Pasadena, the Family's Services Association of Pasadena, and the United Way of Los Angeles County; and as foreman of the Los Angeles County Grand Jury. In 1977 California governor Jerry Brown named him a regent of the University of California.

Orr anticipated that he would be offered the directorship of the Office of Management and Budget when Reagan was inaugurated, because the responsibilities of that office paralleled those that he had carried as director of finance for the state of California. In the autumn of 1980, when Orr worked as deputy director of the office of the president-elect during the transition, President Reagan called on Orr to become secretary of the Air Force. After accepting Reagan's offer, he received tremendous assistance from the outgoing secretary, Hans Mark, who even offered to move out of his office before Orr was confirmed as secretary.

The Reagan administration marked a sharp turnabout from its predecessor's approach to defense spending. "We are going after more military and civilian authorizations, higher force levels, and more airplanes and equipment. We are in an expanding mode, not a contracting mode." Orr claimed this was the lesson of the November 1980 elections. He admitted that he rode the crest of the Reagan defense spending wave and thus, much like Harold Talbott nearly three decades earlier, Orr could concentrate on issues other than weapon system procurement. He chose to focus on the quality of life for Air Force personnel. Indeed, he admitted that his major achievements as secretary were mostly people-oriented. He sincerely believed that women had more opportunities because of his initiatives; he helped to enhance the promotion opportunities of nonrated officers; and he tried to attain better living conditions for service members—better dormitories, better gymnasiums, and family service centers. Both Mrs. Orr and Mrs. Gabriel, the wife of Air Force Chief of Staff Charles A. Gabriel, were ardent advocates of family support centers on Air Force installations worldwide. Two substantial pay raises in 1981 and 1982 kept Air Force salaries even with inflation. All of those activities enhanced retention rates.

During Orr's tenure, he and his wife visited nearly 250 bases, including ones so small that they housed only a Guard or Reserve unit with a hangar and maintenance shop. For three Christmases in a row, the Orrs visited remote air bases, such as Thule and Sondrestrom in Greenland and four remote sites in Alaska and Iceland. Not adverse to public speaking, Orr gave more than seven hundred speeches and press interviews while in office, each time championing the achievements and responsibilities of the Air Force.

When he left office, Orr could point positively to an Air Force that was better equipped than it had been at any moment in the previous decade. It had the B-1B bomber, the ground-launched cruise missile, and 650 more fighter aircraft and 30 more KC-10s than it had when his tenure began. The Air Force Space Command had been initiated and ground had been broken for the Consolidated Space Operations Center in Colorado and for the Air Force Shuttle Launch Facility in California.

When he left office after nearly five years, Verne Orr had surpassed by two months Eugene M. Zuckert's record as the longest-tenured Air Force secretary. Orr would have stayed longer but left because of his wife's ill health. He returned to his private life and to his business

interests in Pasadena, California. He also continued to work on a Ph.D. in public policy and economics, attaining all but dissertation (ABD) status. In June 1999 he became dean of the School of Business and Global Studies at the University of LaVerne, in LaVerne, California, located twenty-five miles east of Los Angeles.

Russell A. Rourke

December 8, 1985–April 7, 1986

Russell A. Rourke

December 8, 1985–April 7, 1986



RUSSELL A. ROURKE was born on December 30, 1931, in New York City. He graduated with honors from the University of Maryland in 1953 with a bachelor of arts degree and earned a law degree from Georgetown University in 1959. He was associated with the law firm of Keogh, Carey and Costello in Washington, D.C., before beginning his government career in 1960. His first government position was as administrative assistant to Congressman John R. Pillion (R.-New York); and in 1965 he became administrative assistant to Congressman Henry P. Smith III (R.-New York).

In 1974 Rourke was the Republican-Conservative nominee for Congress from the 36th District of New York. After that unsuccessful candidacy, he became deputy to presidential counselor John O. Marsh, Jr. Appointment as special assistant to President Gerald R. Ford followed in 1976. His principal responsibilities included acting as legislative liaison between the White House and Congress and regular participation in policy and program meetings with the president, members of the Cabinet, and the White House senior staff. Rourke also undertook special projects assigned by President Ford, and among his final assignments was the White House transition team in 1977.

Rourke served as the administrative assistant to Congressman Harold S. Sawyer (R.-Michigan) before being sworn in as assistant secretary of defense for legislative affairs in May 1981. In the latter capacity, Rourke was the principal adviser to Secretary of Defense Caspar W. Weinberger, regarding congressional consideration of the department's legislative program; maintaining direct liaison with the Congress, the executive office of the president, and other government agencies on defense legislative matters; and overseeing the military department congressional activities on defense matters. He was awarded the Department of Defense Distinguished Public Service Medal by Secretary Weinberger for his superb performance as assistant secretary of defense for legislative affairs.

In July 1985 Rourke retired as a colonel from the U.S. Marine Corps Reserve after thirty-two years of service. Before joining the Reserve, he had enlisted in the U.S. Marine Corps in 1953 and completed active duty as a first lieutenant after serving a tour of duty in Korea. From 1972 to 1974 he served as the commanding officer of Marine Air Control Squadron 24, Quantico, Virginia. His decorations included the Legion of Merit.

During his short tenure as secretary of the Air Force, Rourke observed that the Air Force had done a superb job over the years in recruiting, training, and retaining high-quality people, and that it would continue to work to improve their quality of life. He noted that the Air Force had steadily expanded opportunities for women and that 17 percent of enlisted recruits were women. He pointed out that the Soviet threat remained constant and that Soviet efforts at developing advanced systems continued and covered the complete range of technological weaponry required to modernize all their forces. He foresaw that pressures for reduced deficits and balanced budgets would affect U.S. defense programs, and he predicted that the Air Force could be caught “in the squeeze of lower budget levels and increasing costs to operate and maintain the systems we have been buying over the past five years. That could mean the threat of less funding for modernization programs at the very time we need most to continue them.” Rourke further predicted that deficit spending would characterize the Air Force budgets for the foreseeable future.

Rourke left office in April 1986, citing personal reasons. He is married to Judith Anne Muller of New York City. They have three children.

Edward C. Aldridge, Jr.

June 9, 1986–December 15, 1988

Edward C. Aldridge, Jr.

June 9, 1986–December 15, 1988



Portrait by Everett Raymond Kinstler



EDWARD C. ALDRIDGE, JR., was born on August 18, 1938, in Houston, Texas. He spent his youth in Shreveport, Louisiana, across the river from Barksdale Air Force Base, where he learned to admire the U.S. Air Force and the leaders who made it a great institution.

He received a bachelor of science degree in aeronautical engineering from Texas Agricultural and Mechanical University in 1960 and a master of science degree in the same field from the Georgia Institute of Technology in 1962. Following his formal education, Aldridge held various staff and management positions with the Douglas Aircraft Company, Missile and Space Division, in Santa Monica, California, and in Washington, D.C. Aldridge married Joanne Knotts of Italy, Texas, and they had four children.

In 1967 he joined the staff of the assistant secretary of defense for systems analysis as an operations research analyst and then served as director of the strategic defensive division until July 1972. He also served as an adviser to the Strategic Arms Limitation Treaty talks in Helsinki, Finland, and Vienna, Austria. In 1972 he reentered private industry as a senior manager with LTV Aerospace Corporation in Dallas, Texas, and remained there for a year before being named senior management associate at the Office of Management and Budget, in the executive office of the president.

Aldridge returned to the Department of Defense in February 1974 as deputy assistant secretary of defense for strategic programs. In March 1976 he became the director of planning and evaluation, serving as a principal adviser to the secretary of defense in the planning and program evaluation of U.S. military forces and support structure.

In March 1977 Aldridge became vice president of the national policy and strategic systems group for the Systems Planning Corporation in Arlington, Virginia, where he was responsible for the study and analysis of strategic and conventional forces and long-range strategic planning. In August 1981 he became undersecretary of the Air Force, with additional responsibility for providing overall direction, guidance, and supervision of Air Force space programs, including launch and on-orbit operations and planning for future space capabilities. Before the space shuttle *Challenger* accident in January 1986, Aldridge was in astronaut training at Vandenberg Air Force Base, California.

Secretary of Defense Caspar Weinberger said at Aldridge's swearing-in ceremony that as "we pursue the President's Strategic Defense Initiative, Secretary Aldridge's space program background, his expertise in strategic defense, and his commitment to the program will be enormously useful."

After taking over as air secretary in the second year of President Ronald Reagan's second term, Aldridge did not plan on changing the priorities of the secretariat. He claimed he would continue his predecessors' emphasis on people programs, with special focus on retaining quality personnel. He foresaw tremendous budget cuts as well as structural changes issuing from the administration's implementation of the findings of the Blue Ribbon (Packard) Commission on Defense Management. He understood that it would be impossible to maintain the rate of growth in the Air Force budget that had been enjoyed in the previous five years, warning that, "at best, we might be able to sustain a very limited real growth, and it's going to be tougher to get the military manpower to man our forces." Thus, programs having cost, scheduling, or performance difficulties would be scrutinized closely in terms of requirements and quite possibly would be cut.

During his tenure, Aldridge consistently pursued personnel benefits, including pay raises for civilians and for the military and bonus retention initiatives for military members. Following a trip to the USSR in the summer of 1988, the air secretary reported on the wish of the Soviet government to join with the United States in an exploration of Mars through both unmanned and manned space missions. Aldridge supported the C-17 program and defended the B-1B program, and he was critical of those politicians who chose to use the bomber as a political football. Attaining his office in the wake of the *Challenger* disaster, Aldridge worked very hard to rebuild Air Force space-launch capability and to reduce the service's reliance on the space shuttle to put military payloads into orbit.

After leaving office in December 1988, Aldridge became president of McDonnell Douglas Electronic Systems Company. He remained there until 1992, when he became president and chief executive officer of the Aerospace Corporation, a nonprofit organization dedicated to the objective application of science and technology toward the solution of critical national problems.

Among his many awards and honors are the Secretary of Defense Meritorious Civilian Service Award, three Department of Defense Distinguished Civilian Service Awards, the Department of Defense Distinguished Public Service Award, the Air Force Exceptional Civilian Service Award, the Army Distinguished Civilian Service Award, the National Intelligence Distinguished Service Award, the National Space Club Robert H. Goddard Memorial Trophy, the Air Force Association Jimmy Doolittle Fellow, the Air Force Association Ira Eaker Fellow, and two Air Force Academy Foundation Distinguished American Awards. He also received the Max Kriendler, W. Stuart Symington, and Gen. Bernard Schriever Awards from the Air Force Association.

Donald B. Rice

May 22, 1989–January 20, 1993

Donald B. Rice

May 22, 1989–January 20, 1993



Portrait by George Pollard



DONALD B. RICE was born on June 4, 1939, in Frederick, Maryland. He earned a bachelor of science degree in chemical engineering from the University of Notre Dame in 1961, and a master's degree in industrial management in 1962 and a Ph.D. in economics in 1965 from Purdue University. He received three honorary degrees: a doctor of engineering granted by Notre Dame in 1975, a doctor of management granted by Purdue in 1985, and a doctor of laws granted by Pepperdine University in 1989. Rice married the former Susan Fitzgerald of Evanston, Illinois. They had three children.

Commissioned a second lieutenant in the U.S. Army Ordnance Corps upon graduation from Notre Dame, Rice served on active duty from June 1965 to June 1967 as a captain in the U.S. Army. During that time, he was assistant professor of management and acting deputy director for academics at the Navy Management Systems Center, Naval Postgraduate School, Monterey, California.

From February 1969 to September 1970 he served as deputy assistant secretary of defense for resource analysis. His responsibilities included analysis of cost, manpower, and logistics' requirements; preparation of fiscal guidance issued by the secretary to the military services; and coordination of the Department of Defense's (DOD's) program and budget planning with the National Security Council. Previous to his DOD service, he had been director of cost analysis in the Office of the Secretary of Defense from June 1967.

After leaving DOD he served as assistant director in the Office of Management and Budget until April 1972. In that capacity, Rice was responsible for budgeting, program analysis, and management improvement activities in the areas of agriculture, atomic energy, commerce, energy, the environment, natural resources, public works, science and technology, space, and transportation.

In April 1972 Rice became president and chief executive officer of the Rand Corporation, an independent, nonprofit, public service institution responsible for research and analysis on problems of national security and domestic affairs and for doctoral degree programs in several fields of public policy. He served in that capacity until May 1989, when he accepted President George Bush's appointment as air force secretary.

In addition, from 1975 to 1977 he was appointed by President Gerald Ford to serve as chairman of the National Commission on Supplies and Shortages. He was asked by President Jimmy Carter to direct a resources management review for the secretary of defense, which he conducted from 1977 to 1979. From 1974 to 1986 he served two terms on the National Science Board.

As secretary of the Air Force, Rice became the focal point for, and dominant figure in, setting Air Force policy. He concentrated on developing a strategic framework for the Air Force as a whole. He sought an environment that would cut across and unite individual packets of excellence by focusing the institution on air power's inherent strengths—speed, range, flexibility, precision, and lethality—and on what the Air Force needed to do collectively to create and nurture those strengths. He published this philosophy in a 1990 white paper titled *Global Reach, Global Power*. Both he and Chief of Staff Gen. Merrill A. McPeak used this vision statement to “kill off” some of the old organizational barons and redistribute their estates. In June 1992 Strategic Air Command, Tactical Air Command, and Military Airlift Command passed into history and were replaced by Air Combat Command and Air Mobility Command. Air Combat Command blended the winged firepower in the Air Force into one organization—Global Power. Air Mobility Command lined up most of the mobility and refueling assets on a single team—Global Reach.

Rice envisioned an Air Force that could span the globe rapidly on short notice to extend U.S. influence or achieve political objectives. Operation Desert Shield was one example of global reach: within a few days airlifters vastly exceeded the tonnage and miles of the 450-day Berlin Airlift of 1948. During the Gulf War, Rice established the precedent that the air secretary would become heavily involved in the policy and methods by which the Air Force would fight a war.

In addition, responding to administration policy, Secretary Rice became the focal point for a more efficient, leaner, “meaner” Air Force. He oversaw the cutting of overhead, the streamlining of logistics and finance, and the scrubbing of the acquisition system. But he consistently warned that a catastrophic drawdown would create a “hollow force,” and he supported the retention of several key modernization programs, such as the B-2 and the C-17.

After leaving office in January 1993, Rice became president and chief operating officer of Teledyne Corporation, Inc., of Los Angeles, California. Since that time he has served on the boards of such firms as Vulcan Materials Company and Wells Fargo and Company. Rice also served as a member of the National Committee on U.S.–China Relations. He has authored many articles, reports, and papers dealing with economic policy, government organization and budgeting, defense resources management, energy systems, strategic capabilities and arms control, regulatory problems, and analytical techniques.

Sheila E. Widnall

August 6, 1993–October 31, 1997

Sheila E. Widnall

August 6, 1993–October 31, 1997



Portrait by Everett Raymond Kinstler



SHEILA E. WIDNALL was born in Tacoma, Washington, on July 13, 1938. She grew up near McChord Air Force Base and had a long-standing interest in aircraft and aerodynamics. While in college, she worked summers at the Boeing plant in Seattle. Her father, Rolland Evans, who died in 1991, was a rodeo rider who arrived in Tacoma almost literally with a saddle on his back. There he put himself through school and eventually became a professor and later administrator at Tacoma Community College. Her mother was a juvenile parole officer. Widnall's interest in flight was matched by an interest in science and math, and she won the Washington State Science Contest with a project on the atomic deterioration of uranium. A Massachusetts Institute of Technology (MIT) alumnus from Tacoma suggested Widnall attend that well-respected Cambridge school, and so she received a bachelor of science degree in 1960 and a master of science degree in 1961 at MIT. After earning her doctorate in science there in 1964, she joined the MIT faculty as an assistant professor of aerospace and astronautics. She became an associate professor in 1970 and a full professor in 1974. While at MIT she met Bill Widnall, a New Jersey native. They married in 1960 and have two children.

Widnall headed the MIT engineering department's division of fluid mechanics from 1975 to 1979 and the Fluid Dynamics Research Laboratory from 1979 to 1990. From 1972 to 1975 she served as a member of the advisory committee for the Aeronautical Systems Division at Wright-Patterson Air Force Base, Ohio. She has been a member of the Space and Aeronautical Board; the National Research Council; and the Air Force Academy's Board of Visitors, where she served as chair from 1980 to 1982. In addition, Widnall served as president of the American Association for the Advancement of Science in 1978 and was a consultant for the MacArthur Foundation from 1988 to 1992.

Before she became Secretary of the Air Force, Widnall was named associate provost of MIT and was charged with responsibility in academic integrity, federal relations, faculty retirement, promotion and tenure policies, and international education programs. She received the American Institute of Aeronautics and Astronautics' Lawrence Sperry Award in 1972; the Society of Women Engineers' Outstanding Achievement Award in 1975; and the Boston Museum of Science's Washburn Award in 1984.

During her career, she became known internationally for her work in fluid dynamics, specializing in aircraft turbulence. Widnall won the respect of her colleagues, and Air Force leaders who worked with her considered her a natural choice for secretary of the Air Force.

In nominating her as the first female service secretary—although President George Bush’s secretary of transportation, Elizabeth Dole, indirectly supervised the Coast Guard—in 1993, President Bill Clinton described Widnall as “a woman of high achievement—a respected scientist, a skilled administrator and a dedicated citizen.” He was confident that she would perform in an outstanding manner, guiding the Air Force through a period of post–Cold War change.

As Air Force secretary, Widnall oversaw Air Force modernization at a time when the services were enduring sharply reduced budgets. She successfully pushed the C–17 airlifter program and saw the initial flight of the F–22. Her aeronautical expertise enhanced her understanding of Air Force programs and enabled her to ask the right questions about them and to explain them on Capitol Hill. When she became air secretary, Widnall went from looking at aircraft as machines to considering the people who fly them. She found no contradiction between her academic values and those of the Air Force, because the core values of the Air Force—integrity, service above self, and excellence—were as applicable to academia as they were to the military.

Widnall focused not only on surviving the drawdown; she also concentrated on the future of the Air Force—its capabilities, efficiencies, and potential for innovations. The F–22 was recognized for its stealth and maneuverability characteristics and acknowledged as the vanguard weapon for future air dominance. As secretary, Widnall streamlined the acquisition processes and explored privatization alternatives for virtually every function, from computers to base services to depot maintenance. Because of downsizing, the Air Force had trouble retaining pilots. In the midst of downsizing, she stressed a quality of life program whereby Air Force people enduring the stresses of new missions and high operations tempos would be assured that their families’ needs were cared for in their absence. She stood for the Air Force as an institution during a very difficult time when it was assailed in the press for its position regarding gender issues of the 1990s.

As she had intended when she accepted her appointment, the first woman secretary saw the Air Force through its fiftieth anniversary celebration and activities. Widnall resigned her office to return to MIT in November 1997.

F. Whitten Peters

August 3, 1999—the present

F. Whitten Peters

August 3, 1999–the present



F Whitten Peters was born on August 20, 1946, in Omaha, Nebraska. Following service in the Navy in World War II, Peters' father decided to reestablish his school-building architectural business in a northern "lake" suburb of Chicago, Illinois. There young Peters grew up and attended two local public schools, Lake Bluff Elementary School and Lake Forest High School. His father died when he was thirteen. Peters earned a Harvard Club of Chicago scholarship, and with the money earned at odd jobs he was able to matriculate and thrive at that institution. After graduating magna cum laude with a bachelor of arts degree in government and economics from Harvard University in 1968, he followed his father's example by joining the Navy as a Reserve officer in January 1969 and graduated as a distinguished graduate and company commander the following June. He married Mary Gores on January 2, 1969. They have three daughters.

His computer program training at Harvard aided his selection to the Atlantic Fleet Intelligence Center in Norfolk, Virginia, where he ran the systems and programming division of the computer center. Over the next three years, Peters received orders for Vietnam. These orders were subsequently canceled because his job in nuclear targeting and satellite reconnaissance prohibited assignment to a war zone and travel to Cold War adversarial countries for ten years following the Norfolk assignment. While he was at the Norfolk intelligence center, his unit received a meritorious citation for discovering Russian-built submarine pens in Cuba. In February 1972 he was released by the Navy and, the next day, was hired back as a civilian employee to complete a project. In August 1972 he earned a Frank Knox Traveling Fellowship from Harvard University to attend the London School of Economics, where the following year he earned a master of arts with distinction in economics. Believing in the Kennedy ideal and challenge of public service, Peters thought that the study of law would provide opportunities for such a career, so he entered Harvard Law School, where for two years he served as president of the Harvard Law Review and graduated magna cum laude with a doctor of laws degree in 1976.

Following law school, he clerked for several judges in the District of Columbia, including Supreme Court Justice William J. Brennan, Jr. As the costs of raising a family and the comparative salaries of private law practice rose above the relatively stagnant state of public remuneration, Peters opted for the private sector. He joined the law firm of Williams & Connolly in

Washington, D.C., as an associate in 1978; he became a partner in 1984 and remained until 1995. During that time, he served also as an adjunct lecturer at Columbus School of Law, Catholic University of America, teaching government contract law; and he taught advanced criminal procedure at Georgetown University Law Center. Peters also served as a member of the Department of Defense (DOD) Advisory Committee on Streamlining and Codifying Acquisition Law, and as the chair of the Rules of Professional Responsibility Review Committee at the District of Columbia Bar.

In 1995 Peters became principal deputy general counsel for the Office of the Secretary of Defense, where he worked on counterterrorism issues, special operations matters, cyber warfare, and information operations issues. He also worked on such matters as the legal implication of the Olympics, several political conventions, and President Clinton's 1996 inauguration activities. The following year he served as government representative on a Defense Science Board study of vertical merger policy. Peters wrote widely and spoke extensively on acquisition reform, legal ethics, and criminal law topics. He was invited by Secretary of Defense William Cohen to serve as undersecretary of the Air Force. On November 13, 1997, he was sworn into that office and served as acting secretary of the Air Force when Secretary Sheila Widnall resigned. For nineteen months he wore those two hats, surpassing by many months the record of his closest rival for longest tenure as acting secretary. The single most pressing issue at the moment he assumed office as the acting secretary was the structure of depots—politically a highly charged matter that had to be handled delicately. During his stint with the DOD, Peters had worked on other politically sensitive issues, such as the plane crash that killed Secretary of Commerce Ronald Brown, the insubordination case of Kelly Flinn, and the Air Force's shooting down of two U.S. Army Black Hawk helicopters in Iraq. As a result, he and Chief of Staff Gen. Michael Ryan agreed on the need to establish "a better Public Affairs early warning network," which became the "PAZ" function of the Public Affairs Office.

Following the depot problems both Secretary Peters and General Ryan began to focus on other matters. To address the operations tempo, pay, and retirement issues, both men supported the Expeditionary Air Force concept in August 1998. A six-month vacancy in the position of assistant secretary for acquisition also demanded Peters' time and attention.

On July 30, 1999, Peters was confirmed as Secretary of the Air Force and sworn in on August 3. In addition to supervising the training and equipping of Air Force personnel and being responsible for the service's nearly \$70 billion budget, Peters had to oversee one of the largest drawdowns in the history of the Air Force. Proud of the implications of air power's victory in Kosovo, he nevertheless had to endure the tortuous political struggles to continue funding the production of the F-22 and tenaciously advocated the need to retain technological air superiority. Secretary Peters took steps to make an assignment in Washington, D.C., much more appealing for the best and brightest Air Force majors and lieutenant colonels, rather than a "burnout-pit" to which they never hoped to return. He wanted the Air Force to make a much

more persuasive case to Congress in support of its budget and make a better argument for modernization. Being asked to do so much with such inadequate funds remained a continuing source of frustration for Peters and the Air Force.

CHIEFS OF STAFF OF THE AIR FORCE

Gen. Carl Andrew Spaatz

September 26, 1947–April 29, 1948

Gen. Carl Andrew Spaatz

September 26, 1947–April 29, 1948



Portrait by Thomas Edgar Stephens



CARL ANDREW SPAATZ was born on June 28, 1891, in Boyertown, Pennsylvania. While attending local schools he worked as a linotype operator for his father's newspaper, *The Berks County Democrat*. He graduated from Boyertown High School at age fifteen and in 1906 entered nearby Perkiomen Preparatory School, where his academic career was undistinguished. When his father was injured in a fire two years later, Carl returned home to run the family newspaper while his father recovered. In 1910 Spaatz entered West Point as a member of the last class that would report in March. He graduated in the lower half of his class in June 1914 and was commissioned a second lieutenant of infantry. He wanted to enter flying school but first had to serve a year-long tour as an infantry officer at Schofield Barracks, Hawaii. In October 1915 he left for a seven-month stint at the Aviation School at San Diego, California.

In June 1916 Spaatz was assigned to Columbus, New Mexico, and served with the 1st Aero Squadron under Gen. John J. Pershing in the Punitive Expedition into Mexico. There he met several men who would become lifelong friends, including Millard Harmon. In May 1917 he joined the 3d Aero Squadron in San Antonio, Texas, and was promoted to captain. Also in 1917 he married Ruth Harrison, the daughter of a cavalry colonel. Spaatz next went to France with the American Expeditionary Forces as commander of the 31st Aero Squadron. Late that year he became a member of the American Aviation School at Issoudun and stayed there until August 30, 1918, when he attained the temporary rank of major. In September 1918 he joined the 2d Pursuit Group with the 13th Squadron and was promoted to flight leader. On that assignment he was credited officially with downing three German Fokker aircraft and was awarded the Distinguished Service Cross. In the following year he was stationed in both California and Texas and became department air service officer for the Western Department in July 1919. On July 1, 1920, he was promoted to the rank of permanent major, after having reverted to his former rank of captain following the war.

As a major, Carl Spaatz commanded Kelly Field, Texas, from October 1920 to February 1921 and then served as air officer of the VIII Corps Area until November 1921. He was commanding officer of the 1st Pursuit Group, first at Ellington Field, Texas, and later at Selfridge Field, Michigan, until September 24, 1924. After graduating in June 1925 from the Air Corps

Tactical School at Langley Field, Virginia, he served in the Office of the Chief of the Air Corps at Washington, D.C.

Spatz commanded the Army plane *Question Mark* in its refueling endurance flight in California over the Los Angeles vicinity from January 1 to 7, 1929, keeping the aircraft aloft a record total of nearly 151 hours, and was awarded the Distinguished Flying Cross for his efforts. Spatz commanded the 7th Bombardment Group at Rockwell Field from May 1, 1929, to October 29, 1931, and the 1st Bombardment Wing at March Field, California, until June 10, 1933. Then he served in the Office of the Chief of the Air Corps and became chief of the Training and Operations Division. In August 1935 Spatz enrolled in the Command and General Staff School at Fort Leavenworth, Kansas, and while there was promoted to lieutenant colonel. He graduated in June 1936 and served at Langley Field until he returned to the Office of the Chief of the Air Corps in January 1939.

In November 1939 Spatz received a temporary promotion to colonel, and during the Battle of Britain in the spring and summer of 1940 he spent several weeks in England as a special military observer. In August 1940 he was assigned again to the Office of the Chief of the Air Corps and two months later was appointed assistant to the Chief of the Air Corps with the temporary rank of brigadier general. He became chief of the Plans Division of the Air Corps in November 1940, and the following July he was named chief of the Air Staff at Army Air Forces (AAF) Headquarters.

Several weeks after the attack on Pearl Harbor, Spatz was assigned as chief of the AAF Combat Command at Washington and was promoted to the temporary rank of major general. In May 1942 he became commander of the Eighth Air Force, transferring to the European theater of operations in July 1942 to prepare for the U.S. bombing campaign against Germany. On July 7 he was given additional duty as commanding general of the U.S. Army Air Forces in the European theater. On December 1, 1942, Spatz became commanding general of the Twelfth Air Force in North Africa, and the following February he assumed command of the Northwest African Air Force, which he organized. The following March he attained the temporary rank of lieutenant general.

After Rommel's Afrika Korps had been driven from North Africa and Italy had been invaded, Spatz became deputy commander of the Mediterranean Allied Air Forces, including the Twelfth Air Force in Africa and the Fifteenth Air Force and the Royal Air Force in Italy. He returned to England in January 1944 to command the U.S. Strategic Air Forces in Europe, which he headed throughout the preinvasion period and ensuing campaign against Germany. He won the Distinguished Service Medal for his Africa service and in 1944 was awarded the Collier Trophy, given annually to the American making the most outstanding contribution to aviation. Briefly stated, Spatz commanded the largest armada of aircraft and airmen ever assembled under the control of a single commander. He was one of the chief strategists who resolved the intricate maze of logistics into an effective strategic bombing campaign for the defeat of Germany, Italy, and Japan. General Eisenhower called him "the best air commander I know."

In March 1945 Spaatz received a temporary promotion to four-star rank and in June was assigned to Air Force headquarters in Washington, D.C. The following month he assumed command of the U.S. Strategic Air Forces in the Pacific, with headquarters on Guam. There he supervised the final strategic bombing of Japan by the B-29, including the two atomic bomb missions. He was present at all three signings of unconditional surrender by the enemy: at Rheims, at Berlin, and aboard the battleship USS *Missouri* in Tokyo Bay.

In October 1945 Spaatz returned to AAF headquarters, and the following February he was nominated to become commander of the Army Air Forces. In September 1947 President Truman appointed him as the first chief of staff of the new United States Air Force, a position he held until April 29, 1948.

Assessing the implications of atomic weaponry was only one of the major problems thrust upon the AAF in late 1945 and early 1946. Demobilization was also an issue. To be sure, Spaatz had to oversee the dismantling of the world's most powerful air force and reduce it from 2,300,000 men to 400,000 and from ninety thousand aircraft to less than ten thousand. Besides the quest for autonomy, other goals that Spaatz pursued in concert with the first secretary of the Air Force, Stuart Symington, were the seventy-group Air Force and the reorganization of the service along functional lines. Like Gen. Henry Arnold, Spaatz sought to press forward on scientific research and development and to build a viable aircraft industry.

Serving for only seven months as the Air Force's first chief of staff, he retired with the rank of general on June 30, 1948. In retirement, Spaatz wrote widely on air power subjects and was a contributing editor to *Newsweek* magazine. He also served on the Committee of Senior Advisors to the Chief of Staff, USAF, from 1952 until his death in 1974. He was chairman of the National Executive Board of the Civil Air Patrol starting in 1948 and a member of the American Battle Monuments Commission beginning in 1953. He was a member of the board of directors and third vice president of the Retired Officers Association; a member of the board of directors of the First National Bank of Arlington, Virginia; and a past president and member of the board of directors and the executive committee of the Air Force Association. In addition, he was a past president and member of the board of trustees of the Air Force Historical Foundation. Other boards and committees on which Spaatz served included the Harmon International Trophy Committee, Committee for the Collier Trophy Award, the Hoover Committee on the Reorganization of the Executive Branch of the U.S. Government, and as chairman on the USAF Academy Site Selection Board.

General Spaatz died of congestive heart failure on July 14, 1974, at the age of eighty-three and was interred at the USAF Academy. His longtime friend and associate Lt. Gen. Ira C. Eaker commented at the time that Spaatz always exhibited absolute integrity and possessed wisdom and tremendous common sense.

Gen. Hoyt S. Vandenberg

April 30, 1948–June 29, 1953

Gen. Hoyt S. Vandenberg

April 30, 1948–June 29, 1953



Portrait by Francis Henry Beaugureau



HOYT S. VANDENBERG was born in Milwaukee, Wisconsin, on January 24, 1899. His father, William Collins Vandenberg, was president of a bookbinding company. His uncle, Arthur H. Vandenberg, went from newspaper publishing in Grand Rapids to prominence as a Republican member of the U.S. Senate. His family moved to Lowell, Massachusetts, in 1910 and Hoyt participated in the gamut of high school sports—baseball, football, hockey, golf, and track. He had an avid interest in scouting, ultimately becoming an Eagle Scout. His experience at the Plattsburg Junior Camp at Plum Island, New York—a sort of military school for the wealthy—in the summer of 1916 instilled a desire for a military career. Political connections and a year of hard work at Columbian Preparatory School in Washington, D.C., earned him an appointment to West Point, where he graduated and was commissioned a second lieutenant in the Air Service in 1923.

After completing the Primary Flying School at Brooks Field, Texas, in 1923 and Advanced Flying School at Kelly Field, Texas, the next year, he received his first assignment with the Third Attack Group at Kelly Field and assumed command of the 90th Attack Squadron. In Texas he married Gladys Rose, whom he had met as a cadet. They had two children. In 1927 he became an instructor at the Air Corps Primary Flying School at March Field, California. From 1929 to 1931 Vandenberg was with the 6th Pursuit Squadron at Schofield Barracks, Hawaii, where he served as squadron commander for most of that period. After two years as an instructor at Randolph Field, Texas, he entered the Air Corps Tactical School at Maxwell Field, Alabama. He graduated in 1935, was promoted to captain, and the following year graduated from the Command and General Staff School at Fort Leavenworth, Kansas. He graduated from the Army War College in 1939 and served in the Plans Division of the Office of the Chief of the Air Corps. In March 1940 he was promoted to major and assigned to the staff of Maj. Gen. Henry H. Arnold, with whom he helped develop strategic plans for Army Air Corps deployment in war. He was promoted to temporary lieutenant colonel in November 1941 and to temporary colonel in January 1942. Two months later he was named operations and training officer of the Air Staff.

In June 1942 Vandenberg went to England, where he joined Lt. Col. Lauris Norstad to plan the invasion of North Africa and to organize the required air forces. While in England he

helped organize and was appointed chief of staff of the Twelfth Air Force under Maj. Gen. James H. Doolittle. On February 18, Vandenberg became chief of staff of the Northwest African Strategic Air Force, with which he flew on numerous missions over Tunisia, Italy, Sardinia, Sicily, and Pantelleria during the North African campaign. He was awarded both the Silver Star and the Distinguished Flying Cross for his services during this time.

In August 1943 he returned to Washington, D.C., and to Air Corps headquarters as deputy chief of the Air Staff. The following month he became head of the Air Mission to Russia under Ambassador Averell Harriman and returned to the United States in January 1944. In March 1944 he was promoted to temporary major general and ordered back to England as deputy commander of the Allied Expeditionary Air Force under Air Chief Marshal Sir Arthur W. Tedder and as commander of the U.S. air component. In August 1944, having already led in planning the tactical air support program for the European invasion, Vandenberg took from Lt. Gen. Lewis H. Brereton the command of the Ninth Air Force—a huge unit consisting of more than four thousand officers and men. The Ninth flew close tactical support missions in conjunction with ground forces, particularly those of Lt. Gen. George S. Patton's Third Army, and flew escort missions with the strategic bombers of the Eighth Air Force. In March 1945 Vandenberg was promoted to the temporary rank of lieutenant general. In May he returned to Washington, D.C., and in July was named assistant chief of staff of operations of the Army Air Forces. The following January he was appointed chief of the Intelligence Division of the General Staff and in June became director of the Central Intelligence Group, a predecessor of the Central Intelligence Agency, which was formed in 1947. In September 1947 he became deputy commander and chief of the air staff of the Army Air Forces.

When the Air Force attained its independence in September 1947, General Vandenberg became vice chief of staff, and in April 1948 he succeeded Gen. Carl Spaatz as Chief of Staff of the Air Force. He held that post through critical periods of the Berlin Airlift, 1948–1949, and the Korean War, 1951–1953. He was a leading figure in the Air Force–Navy fight over carrier-based aviation, which was resolved in favor of the Air Force. The controversy over the Armed Services Unification Bill found him in a leading role as a champion of unification. “Air power can never win a war by itself,” he said. “The Air Force is one part of an air–land–sea team, on which no one unit is more important than the other two.” Vandenberg got along very well with the first secretary of the Air Force, W. Stuart Symington. The pair worked closely together and their professional relationship continued after Symington left office in 1950.

At the outbreak of the Korean War, the Air Force barely was able to perform its atomic mission. Its funding had been cut by the bare-bones policies of President Harry S Truman and Secretary of Defense Louis Johnson, which prompted Vandenberg to consider his charge a “shoestring air force.” During his tenure as chief, Vandenberg pursued technological modernization for the Air Force—rocket development, computer proliferation, thermonuclear experimentation, and the transition to an all-jet inventory. He also picked competent individuals for crucial positions—

Gen. Curtis E. LeMay for the Strategic Air Command, Gen. Lauris Norstad in Europe, Lt. Gen. Otto P. Weyland in Korea, and Maj. Gen. William H. Tunner for the Berlin Airlift.

On April 30, 1952, Vandenberg began serving an extended term of fourteen months as Air Force chief of staff. This term was granted by President Truman to enable him to round out thirty years of service in the highest rank he attained. During his last year in office, he fought hard for the 143-wing Air Force. Always conscious of the ever-growing Soviet threat, he argued that anything less than a force of that size would be a “calculated risk” to the security of the United States and the free world. Although he lost that immediate effort—the program would be stretched out—he could be proud that the Air Force had doubled in size since the beginning of his tenure.

At General Vandenberg’s retirement ceremony in June 1953, Secretary of the Air Force Harold E. Talbott, who presented the Distinguished Service Medal to Vandenberg, said he was “a prime architect of today’s powerful air arm” and a “brilliant air strategist.” Soon after his retirement, the cancer that had been diagnosed earlier began to take its toll, and he succumbed to his illness on April 2, 1954. His funeral was held at the Washington Cathedral, and the prominence of the man and the significance of his untimely loss could be seen in the list of pallbearers—George Marshall, Robert Lovett, Stuart Symington, Carl Spaatz, Omar Bradley, and Bernard Baruch. Gen. Nathan F. Twining, who served three years as Vandenberg’s vice chief and would succeed him, said at the time of the funeral service that “only those who worked closely with General Vandenberg were fully aware of the depth of his thinking, the careful balance of his judgment and the soundness of his decisions.”

Gen. Nathan Farragut Twining

June 30, 1953–June 30, 1957

Gen. Nathan Farragut Twining

June 30, 1953–June 30, 1957



Portrait by Charles Baskerville



NATHAN FARRAGUT TWINING was born on October 11, 1897, in Monroe, Wisconsin, one of eight children. In 1911 the family moved to Portland, Oregon, where he and his brothers indulged their passionate interest in hunting and fishing. In the spring of 1915, Twining joined the Oregon National Guard, presumably because “they had a good rifle range and he liked to shoot.” He attained the rank of corporal as an infantryman with that Guard unit on the Mexican border in 1916. In June 1917 he entered the accelerated wartime West Point class and graduated in November 1918 as a second lieutenant, just days too late for service in World War I.

In July 1919 he joined the U.S. forces in Germany as a military ground observer and toured Belgian, French, and Italian battlefields. That September he entered the Infantry School at Fort Benning, Georgia. After graduating in June 1920, he received an assignment to the 29th Infantry Regiment at Fort Benning. In February 1922 he became aide to Brig. Gen. B. A. Poore, serving with him at Camp Travis, Texas; Fort Logan, Colorado; and Fort Sam Houston, Texas. But Twining was not convinced that the infantry was for him, and after a ride in a Jenny trainer piloted by an Air Service officer, he knew that he wanted to fly. After Twining’s repeated efforts to transfer to the Air Service, Poore finally signed off and let his aide begin air training. Twining entered Primary Flying School at Brooks Field, Texas, in August 1923. A year later he graduated from Advanced Flying School at Kelly Field, Texas, and then returned to Brooks Field as an instructor. On November 16, 1926, he officially transferred to the Air Service, and the following September he was reassigned to March Field, California, where he served as a flying instructor. Twining later recalled those early years of virtually unrestricted flying in Texas with exuberance: “There were no airfields then, and shooting [landings in] those little cow pastures was something. When you needed gas you staked the airplane down and went to town and got it.”

In February 1929 he joined the 18th Pursuit Group at Schofield Barracks, Hawaii, where he served successively as adjutant, personnel officer, headquarters detachment commander, and commanding officer of the 26th Attack Squadron. Lieutenant Twining was ordered to Fort Crockett, Texas, in March 1932, and was assigned to the 3d Attack Group as a squadron commander. In August of that year he joined the 90th Attack Squadron and, a month later, the 60th

Service Squadron at the same base. An auto accident and, later, his marriage to Maude McKeever and the responsibility of raising three children led him temporarily to abandon flying for work in aircraft maintenance and engineering. Beginning in 1932, both his assignments and the development of his military career became more specialized as he focused on such areas as improving aircraft maintenance. He became engineering officer for the Central Zone of the U.S. Army Air Mail Service in Chicago, Illinois, in February 1934, and in June returned to Fort Crockett, where he became adjutant to the 3d Attack Group. In May of that year Twining was handpicked by then Lt. Col. Henry “Hap” Arnold as a pilot on the 1934 Alaskan Flight, but Arnold soon removed Twining because of a divergence of views over the ratio of pilots to mechanics. Apparently that difference did not bias Arnold against Twining, however, because some six years later Arnold, who was then the chief of staff of the Air Corps, assigned the newly promoted Colonel Twining to be his assistant executive in the Office of the Chief of the Air Corps.

In March 1935 Twining became assistant operations officer of the Third Wing at Barksdale Field, Louisiana, where he was finally promoted to captain after seventeen years as a lieutenant. That August he entered the Air Corps Tactical School at Maxwell Field, Alabama, and completed the course a year later. In August 1936 he entered the Command and General Staff School at Fort Leavenworth, Kansas, and graduated the following June. At his next assignment as Air Corps technical supervisor at San Antonio Air Depot, Duncan Field, Texas, in July 1937, Twining gained a solid understanding of logistics. Three years later he was reassigned to the Office of the Chief of the Air Corps in Washington, D.C.; within three months he was chief of the technical inspection section in that same office. He then joined the operations division in December 1941. In February 1942 General Arnold brought Twining in as his assistant executive and three months later appointed him director of War Organization and Movements in the Office of the Chief of the Air Corps, a position that directed the assembly of task forces, prepared troop movement orders, and allocated aircraft and personnel. Twining’s persistent pleas to Arnold to send him to war and out of the paper-shuffling business were finally acknowledged in July 1942, when he was sent to the South Pacific as chief of staff to Maj. Gen. Millard F. Harmon, the commanding general of the U.S. Army Forces in the South Pacific Area.

During World War II, Twining commanded three Air Forces—two in the Pacific and one in the Mediterranean—and flew combat missions with all three. In January 1943 he took command of the Thirteenth Air Force, whose mission was to provide air cover for operations in the Solomon Islands. About two weeks after he assumed command of the Thirteenth Air Force, the heavy bomber on which he was flying a mission was forced down in the sea at night. The plane sank in less than a minute. General Twining and fourteen others were left with two rafts, each designed to carry six men. For provisions the group had one chocolate bar, a can of sardines, and a canteen only half full of water. During the six days they spent on the rafts, they

beat off a shark attack with their paddles and survived on the rainwater they collected and the two albatrosses they shot and ate raw. All fifteen men were suffering from starvation, fatigue, and sunburn when Navy airplanes rescued them. Subsequently, on July 25, 1943, Twining was appointed commander, Aircraft, Solomon Islands, and placed in tactical control of all Army, Navy, Marine, and Allied Air Forces in the South Pacific, one of the first joint air commands in U.S. history.

During the Bougainville campaign, Twining's aircraft permanently knocked the Japanese airfields out of operation while they cleared the skies of enemy aircraft. It was during that period that he became a staunch convert to the doctrine and tenets of strategic bombardment. Sent stateside for some needed rest in December 1943, he was "kidnapped" by General Arnold (according to Adm. William Frederick Halsey and General Harmon) and not sent back to the Pacific, but rather to Italy, where he assumed command of the Fifteenth Air Force, providing tactical support to then Lt. Gen. Mark Clark's Fifth Army; covering landings in southern France; and carrying out strategic bombing forays into Germany, Austria, and the Balkans, including the famed raid on the Ploesti oil fields in Romania. Two months later, in addition to his other duties, he took command of the Mediterranean Allied Strategic Air Forces. After some serious and unfortunate errors, especially at Cassino—where bombs were dropped on friendly forces—he was able to develop his Fifteenth Air Force to become the near equal of the Eighth Air Force in England.

Twining returned to the States in June 1945, and once again Arnold sent him on another command assignment, this time replacing Gen. Curtis E. LeMay as head of the Twentieth Air Force in the South Pacific theater. His B-29 Superfortresses pounded the Japanese home islands and dropped the atomic bombs at Hiroshima and Nagasaki. In October 1945 he was assigned to Continental Air Force Headquarters at Bolling Field, Washington, D.C., and two months later became commanding general of Air Materiel Command, with headquarters at Wright Field, Ohio. On October 1, 1947, Twining was named commanding general of the Alaskan Department, and on October 21 he became commander in chief of the Alaskan command, with headquarters at Fort Richardson. After a brief stint as acting deputy chief of staff for personnel at Air Force Headquarters in Washington, D.C., in July 1950, he was appointed Air Force vice chief of staff on October 10, 1950, with promotion to general.

In June 1953 Twining replaced Vandenberg as chief of staff of the Air Force. In that position he helped expand the nation's worldwide network of air bases for strategic bombers and played a major role in forming United States policy in Indochina. He also was instrumental in developing nuclear air weapons and the supersonic missiles and jets designed to deliver them. He was an ardent advocate of the Strategic Air Command (SAC) and believed that SAC was the best deterrent to Communist military power. He also gained a reputation for easing the acrimonious controversies that characterized interservice relations in the immediate postwar years. One of the most noteworthy events during his tenure as air chief was his visit to the

USSR. At the invitation of the Soviet Union, President Dwight D. Eisenhower sent a delegation of technical experts headed by General Twining to inspect Soviet air facilities—the first such visit by U.S. officers since the end of World War II.

In 1957 President Eisenhower named Twining chairman of the Joint Chiefs of Staff (JCS), the first Air Force officer ever to hold the post. During the Quemoy and Matsu Islands crisis off the coast of China in August 1958, Twining and the Joint Chiefs recommended the use of whatever force was necessary, including atomic weapons, to keep the Communist Chinese from gaining control of the islands. The Department of Defense Reorganization Act of 1958, which gave the JCS chairman the previously lacking authority to assign tasks to the Joint Chiefs of Staff, was passed during Twining's tenure as chairman. He personally took a leading role in both explaining and supporting Eisenhower's proposals before Congress and working out the implementation once the legislation was enacted.

General Twining served the Joint Chiefs of Staff until September 1960, when failing health and a cancer operation cut short his stint as chairman. Following his retirement from military service, he became vice chairman of the Holt, Rinehart, and Winston Publishing Company. He died of cardiopulmonary arrest on March 29, 1982.

Gen. Thomas Dresser White

July 1, 1957–June 30, 1961

Gen. Thomas Dresser White

July 1, 1957–June 30, 1961



Portrait by Paul F. Trebilcock



THOMAS DRESSER WHITE was born on August 6, 1901, in Walker, Minnesota, the son of an Episcopal bishop. One of his great-grandfathers, also a minister in the church, had officiated at the marriage ceremony of Abraham Lincoln. Another great-grandfather was the eloquent U.S. senator from South Carolina, John C. Calhoun. At an early age White exhibited remarkable intellectual gifts, along with a desire for travel and adventure. He attended St. John's Military Academy in Delafield, Wisconsin, from 1914 to 1918, when he was appointed to the U.S. Military Academy at West Point.

"Tom," "Tommy," or "T.D.," as he was called by his classmates, edited the school magazine and later the yearbook, which predicted his future with amazing accuracy: "The echo of a steamboat whistle never fails to awaken in him the wanderlust, and he is always [thinking] foreign service. The best we can wish for him is that on graduation he will have his chance as attaché in some far capital." He was to get this wish, and much more. Seven months before turning nineteen, he graduated in the class of 1920, making him one of the youngest graduates in the history of the academy.

Assigned to the infantry, Lieutenant White soon grew bored with the rather dull peacetime duties of a ground officer and became interested in airplanes. After serving three years in the Panama Canal Zone, he transferred to the Air Service and won his wings in 1925, after learning to fly at Brooks and Kelly Fields in San Antonio, Texas. The following year he was assigned to the 99th Observation Squadron in Washington, D.C., where he also enrolled at Georgetown University to study the Chinese language. In May 1927 he married Rebecca Blaine Lipscomb, the daughter of a New York publisher. Their daughter later married "Billy" Mitchell, Jr., son of the famous general. Shortly after his marriage, White was sent to Peking, China, to continue his study of Chinese, and while there he compiled the *English-Chinese Vocabulary of Aeronautical Terms*.

While in Peking, White convinced his superiors to allow him to observe the fighting between Chiang Kai-shek and the Communists. He sent back so thorough a report that his superiors subsequently allowed him to extend his stay on the Chinese border as long as he continued to submit such comprehensive reports. During his stay in China, he also began to study the Russian language, a discipline that would serve him well after the United States granted

diplomatic recognition to the USSR in 1933. In February 1934 William C. Bullitt, the first U.S. ambassador to the Soviet Union, selected the thirty-three-year-old Air Corps first lieutenant and Russian linguist to serve as air attaché and pilot of the embassy airplane.

On one flight as White piloted Bullitt, the aircraft developed engine troubles. With no airfield in sight, White eased the plane down into a bog—nose over. Muddy but uninjured, Bullitt wired Roosevelt: “We landed upside down, but came out right side up.” When not piloting the embassy plane, White wrote excellent reports about the USSR, and his superiors in Washington commended him for his observations on the growth of Soviet air power.

A series of attaché assignments in Italy, Greece, and Brazil further developed White’s talents, not only as a first-rate intelligence officer, but also as an accomplished linguist. During those tours, he became fluent in Chinese, Russian, Italian, Greek, Portuguese, and Spanish. In March 1938 he married for the second time, to Constance Millicent Rowe, daughter of a British Indian civil service officer. Promoted to captain in August 1935, he returned to the United States in May 1938 to attend the Air Corps Tactical School at Maxwell Field, Alabama, and the Army Command and General Staff School at Fort Leavenworth, Kansas. The schools provided him the broad theoretical background necessary for higher command and kept him abreast of U.S. air power and military doctrine.

Upon completing the Leavenworth course, he was assigned again to staff duties in the office of the Chief of the Air Corps. Shortly thereafter, he was promoted to major and sent to Brazil as military attaché. There he continued his study of languages, and with his wife Constance discovered the wonders of rare tropical fish, becoming an ichthyologist. White’s catches and Constance’s watercolors of the fish helped scientists distinguish species and establish a basic description for the designation of new species. In their honor, two previously unknown species of tropical fish were named “*Cynolebias Constanciae*” and “*Cynolebias Whitei*.”

After World War II began, White was recalled to the United States in 1942 to serve as assistant chief of staff for operations and then chief of staff of the Third Air Force at Tampa, Florida, whereupon he was promoted to brigadier general. In January 1944 he was reassigned to Army Air Forces Headquarters in Washington, D.C., where he became assistant chief of staff for intelligence. In that post he helped formulate plans for the D-Day invasion.

His request for combat duty was honored in September 1944, when he went to the Pacific as deputy commander of the Thirteenth Air Force and took part in the New Guinea, Southern Philippines, and Borneo campaigns. Always widening his linguistic abilities, he devoted his little spare time to the study of the Micronesian and Filipino dialects, as well as the Japanese language. In June 1945 Brigadier General White became commanding general of the Seventh Air Force in the Marianas and led it in island-hopping to Okinawa, where it played an important role in bringing about the Japanese surrender. At the end of the war, he took the Seventh to Hawaii. Promoted to major general in 1946, when many other general officers were being

reduced in rank because of congressional ceilings, he was called to Tokyo as chief of staff of the Pacific Air Command. One year later, he assumed command of the Fifth Air Force in Japan.

White returned to the United States in 1948 to serve as director of United States Air Force Legislation and Liaison. He was promoted to lieutenant general in 1951, and for more than a decade he held a succession of top-level posts in Headquarters USAF: Air Force member of the Joint Strategic Survey Committee in 1950; director of plans in 1951; and deputy chief of staff for operations in 1951. In 1953 Gen. Nathan F. Twining selected him as his vice chief of staff.

As Twining's vice chief, General White, now at four-star rank, was largely responsible for domestic issues such as the air defense buildup. Beginning in 1954, the Air Force constructed the most technically advanced air defense network the world had ever seen, centered on the semiautomatic ground environment (SAGE) system, a computer-oriented command, control and communications network. This system could identify hostile aircraft approaching the United States and direct friendly fighters to intercept them. In addition, during his stint as vice chief of the Air Force, he initiated serious efforts to deploy intercontinental ballistic missiles (ICBMs). While advocating ICBM programs, White argued that missile systems would not eliminate the requirement for manned aircraft.

In 1957 White replaced Twining as chief of staff of the Air Force. In that position his major challenge was to weave a complex array of missiles and space and atomic weapons into the nation's deterrent screen. To accomplish that task, he called for a "mixed force" of strategic bombers; intercontinental and medium-range ballistic missiles; tactical aircraft; installations and reliable and secure communications; an advanced reconnaissance system; a modernized cargo fleet; and advanced space systems. He believed that the Air Force could not devote its resources overwhelmingly to one weapon system. Although he had been in the forefront in encouraging research and development of the ICBM, he did not consider it a weapon that would enable the Air Force to fulfill all of its defense requirements. On this point, subsequent events proved him to be profoundly correct, and it may be in his "mixed force" concept that White left his most important legacy as chief of staff.

In developing his ideas of future force requirements and military strategy, the general said, "There is no dividing line between air and space; they are one vast operating arena, and they must be considered as one medium: aerospace. . . . We must move steadily toward operations in space—not merely because it is there, challenging us, but because it is vital to our nation's security to do so." Under White's tenure, the Air Force made its first deep move into space, launching satellites for reconnaissance, weather forecasting, and communications, and as space probes.

When he retired in 1961, the National Geographic Society honored him by designating a space award to be given annually in his name. The award would go "to that military member or civil service employee of the United States Air Force who has made the most outstanding

contribution to the nation's progress in aerospace." Among the award's first recipients were Air Force astronauts Virgil "Gus" Grissom, Gordon Cooper, and Edward White. The Air Force Academy established the National Defense Award named after General White in 1962 to honor the living U.S. citizen who contributed most significantly to the national defense and security of the United States during the preceding year. In addition, the Natural Resources Award, which is presented annually to the Air Force base displaying the greatest effort in conserving natural resources, was named after General White. Upon the general's retirement, President John F. Kennedy cited him for discharging "with great distinction the tremendous responsibility of assuring strong, effective deterrent forces in being while simultaneously integrating into the Air Force the new military systems which are the products of modern technology."

White kept busy in retirement. President Kennedy appointed him to the General Advisory Committee of the Arms Control and Disarmament Agency, and President Lyndon B. Johnson extended the appointment. White was a director of several companies, including Eastern Airlines, and in mid-1964 was elected board chairman of Electronic Teaching Laboratories in Washington, D.C. He also frequently contributed articles to *Newsweek* magazine. Although suffering from the initial stages of leukemia in 1965, he was called upon to chair a special advisory committee appointed by Secretary of the Air Force Eugene M. Zuckert to investigate the cadet honor system and the athletic program at the Air Force Academy. It was his final mission for the Air Force and his country; he died on December 22, 1965. Eulogizing the general, former President Dwight D. Eisenhower described him as "a man of intense dedication . . . intelligent, thorough and flexible in his thinking." Gen. Curtis E. LeMay, White's successor as chief of staff, praised him as "a man of action, an erudite scholar and thinker and an enlightened human being."

Gen. Curtis Emerson LeMay

June 30, 1961–January 31, 1965

Gen. Curtis Emerson LeMay
June 30, 1961–January 31, 1965



Portrait by Sandor Klein



CURTIS EMERSON LeMAY was born in Columbus, Ohio, on November 15, 1906. He recalled being happiest as a child when prowling the countryside with a gun and bowie knife. The son of an ironworker, LeMay worked in a foundry at night so he could attend Ohio State University.

After receiving a reserve commission in the Army field artillery in 1928, he left school to enter flight training at Kelly Field, Texas. When he received his pilot's wings, he transferred to the Air Corps and obtained a regular commission in January 1930. Two years later he received his bachelor's degree in civil engineering from Ohio State.

Lieutenant LeMay's first tour of duty was with the 27th Pursuit Squadron at Selfridge Field, Michigan. He served in various assignments in fighter operations before he transferred to bomber aircraft in 1937 as a member of the 2d Bomb Group at Langley Field, Virginia. In 1937 and 1938 he was the lead navigator on two mass flights of B-17 Flying Fortresses to South America. The group received the Mackay Trophy in 1938 for that outstanding aerial achievement, the first such mass flight in history. Prior to the U.S. entry into World War II, LeMay pioneered air routes over the South Atlantic to Africa and over the North Atlantic to England. He was promoted to major in 1941, to lieutenant colonel in January 1942, and to colonel in March 1942.

After he was named commanding officer of the 305th Bombardment Group, LeMay trained it in California and then led it and its B-17 Flying Fortress bombers to Europe and into combat. One of his most famous acts of the war occurred when he ordered his men to stop taking evasive maneuvers while over the target. He doubted that such maneuvers did any good and was sure they threw off bombing accuracy. With his cigar firmly in place, he personally led the next raid, coming in straight and level through heavy antiaircraft fire to strike at the submarine pens at St. Nazaire. The flight became legendary. LeMay pioneered battle formations of B-17s to provide better defensive power against enemy fighters. He took command of the 3d Bombardment Division and led a famous shuttle mission in August 1943 during which bombers took off from bases in England, struck deep into Germany against the Messerschmitt plant at Regensburg, and landed in North Africa. Although promoted to brigadier general a month later, he never lost the ability to identify with enlisted men. During World War II, he

amended a series of seemingly endless Allied Command memos forbidding fights between U.S. and British servicemen by noting that he endorsed the order and he wanted it known that if his men did fight, they were to win.

In July 1944 LeMay was transferred to the Pacific to direct the B-29 heavy bombardment operations of the XX Bomber Command in the China-Burma-India theater. He later commanded the XXI Bomber Command with headquarters on Guam and still later became chief of staff of the Strategic Air Forces in the Pacific. On March 9, 1945, he shifted the tactics of the bomber force from high-altitude precision attacks to low-altitude nighttime operations using incendiary bombs. A formation of more than three hundred B-29s set Tokyo ablaze, and other firebombing strikes followed. Preparations for the atomic bombings of Hiroshima and Nagasaki took place under his command, but LeMay had predicted that the firebombing would destroy every worthwhile target in Japan by November 1945 and that the atomic strikes would not be necessary. At the conclusion of World War II, he returned to the United States piloting a B-29 Superfortress on a nonstop, record-making flight from Hokkaido, Japan, to Chicago, Illinois.

In December 1945 LeMay became deputy chief of air staff for research and development. In October 1947 he was chosen to command the U.S. Air Forces in Europe, with headquarters at Wiesbaden, Germany. He organized air operations for the famous Berlin Airlift—a remarkable exhibition of logistical air power that impressed the world and left the Soviets utterly defeated in their attempt to starve West Berlin into submission. General LeMay was a more-than-occasional pilot during the airlift, claiming that he had to be in Berlin “for a conference” and saying he might as well fly a much-needed transport rather than travel as a VIP passenger.

In 1946 LeMay was named commanding general of Strategic Air Command (SAC), and over the nearly ten years that he held the position, he built the organization into a global striking force that was the most efficient and feared nuclear arm of the 1950s and 1960s. Indeed, he made SAC into a proud elite force that kept waves of nuclear-armed bombers aloft twenty-four hours a day. He perfected aerial refueling and boasted a force that with nearly twenty bases worldwide was ready to strike anywhere at any time. One of the many legendary stories about General LeMay was that he once found a SAC sentry who had put down his weapon to eat a sandwich. “This afternoon I found a man guarding a hangar with a ham sandwich. There will be no more of that,” he raged in a memo. Yet he was known also for his concern for the physical well-being and comfort of his men. He was as demanding of the brass as he was of his pilots and men and was known as a general who would not order his men to do something he would not do himself.

In July 1957 General LeMay returned to Washington as vice chief of staff of the U.S. Air Force under Gen. Thomas D. White. LeMay became chief of staff of the U.S. Air Force in July 1961, and in that role he tangled with Secretary of Defense Robert McNamara over plans to cut back on manned bombers for ballistic missiles. McNamara had denied LeMay the B-70

bomber—which the general wanted as the successor to the B-52—and forced him to accept the F-111 fighter-bomber. General LeMay also disagreed with McNamara’s restraints on U.S. air power in Vietnam, a sore point for a former combat pilot who believed in and had fought in all-out war. After LeMay retired he announced that McNamara’s plans “may be signaling the end of the country.”

Although he was a bomber advocate, LeMay supported an Air Force presence in space, maintaining that “no nation can afford to allow an enemy one-sided exploitation of space, or any other medium for communications and observation in wartime. If one of two opponents possesses military capabilities relative to space, and the other does not, there can well be one-sided military exploitation of space in wartime. . . .” He added that the military implications of space were more dangerous and even more revolutionary than were those that accompanied the evolution of the airplane. “For our own safety,” he said, “we must take the lead and remain in the forefront of whatever developments may come.”

After retirement, LeMay served as board chairman of a Los Angeles electronics firm but was fired for his active support of George Wallace’s bid to become the American Independent Party’s candidate for president in 1968. LeMay later accepted Wallace’s invitation to become his vice presidential running mate. General LeMay frequently expressed strong anticommunist views, in keeping with a basic conservative temperament. “I don’t believe there are good Communists and bad Communists,” the general said. “I just think they are Communists and they all have the same basic principles involved which I think are basically wrong.” This architect of strategic air power died of a heart attack in a California military hospital on October 1, 1990.

Gen. John Paul McConnell

February 1, 1965–July 31, 1969

Gen. John Paul McConnell
February 1, 1965–July 31, 1969



Portrait by Woodi Ishmael



JOHN PAUL McCONNELL was born on February 7, 1908, in Booneville, Arkansas, the son of a doctor. He graduated magna cum laude from Henderson Brown College at Arkadelphia, Arkansas, with a bachelor of science degree in 1927. He then coached high school football and was an oil field roustabout before entering the U.S. Military Academy at West Point. There he set an academy four-hundred-meter hurdle record and was first captain of the corps of cadets for the class of 1932.

After taking flying training at Randolph and Kelly Fields, Texas, he received his wings in 1933. Serving as a fighter pilot during his early years in the Army Air Corps, McConnell gained broad experience through a variety of operational and administrative assignments, including duty as assistant executive in the Office of the Chief of Army Air Forces in Washington. He subsequently served in key Air Force positions in Asia and in Europe.

In 1943 McConnell became chief of staff of the China–Burma–India Air Force Training Command at Karachi, India, and remained in Asia for the rest of the war. While serving as a senior air staff officer at Air Command Southeast Asia and deputy commander of the Third Tactical Air Force in 1944, he participated in combat operations against the Japanese in Burma. In 1946 he was named senior air adviser to the Chinese government and, at the same time, commanded the Air Division, Nanking Headquarters Command. McConnell married Sally Dean, whom he met in Ceylon where she served as a Women’s Army Corps officer on the staff of Lord Louis Mountbatten. They had two sons.

McConnell returned to Air Force headquarters in Washington, D.C., in 1947 to become chief of the Reserve and National Guard Division and the next year was appointed chief of the Air Force’s Civilian Components Group. Assigned to England in 1950, he served as deputy commander and, later, as commander of the Third Air Force. He then took command of the 7th Air Division of the Strategic Air Command (SAC), simultaneously commanding the Third Air Force. This was followed by a four-year tour as director of plans at Headquarters SAC, Offutt Air Force Base, Nebraska. In 1957 McConnell was named commander of SAC’s Second Air Force at Barksdale Air Force Base, Louisiana, and four years later returned to SAC headquarters to become vice commander in chief.

In 1962 General McConnell was assigned to Europe as deputy commander in chief of the United States European Command and was promoted to four-star rank. He was appointed vice chief of staff of the United States Air Force in August 1964.

McConnell's appointment as chief of staff of the Air Force on February 1, 1965, was considered by many inside and outside the Air Force as the beginning of a new era. His predecessor, Gen. Curtis E. LeMay, possessed an international reputation as the last of the World War II heroes and the premier architect of the Strategic Air Command—the most powerful military organization in all of history. Although McConnell was a wartime flying general by the age thirty-six (he had served in the China–Burma–India theater as director of plans for LeMay's SAC and had been deputy commander of the United States European Command in NATO), he was seen as one of the new breed in Secretary of Defense Robert S. McNamara's Pentagon—an organization man highly regarded in for his planning ability, his interpersonal skills, his intellect, and his trustworthiness. He was considered McNamara's man, and his appointment was expected to ease some of the tensions that had surfaced while the crusty and sometimes plainspoken LeMay was in office. Many insiders speculated that McConnell's role would be to present the Air Force as an integrated whole, no longer dominated by SAC, with more emphasis on conventional warfare and counterinsurgency.

During his years as chief of staff, General McConnell confronted some of the most difficult challenges ever to face an officer in that post: he directed the expansion of tactical forces for an expanding conflict in Southeast Asia; oversaw controversial weapons procurement problems; and tried to map out the strategic future of the Air Force, its personnel, and materiel. McConnell not only had to deal with a vast array of problems; he had to do it in the unsettled political arena of the 1960s. He worked most of that time with a demanding defense secretary; a colorful and forceful president, Lyndon B. Johnson; and an always-questioning Congress. He also delicately balanced his responsibilities to his commander in chief with his responsibility as the chief spokesman for the Air Force.

McConnell's personality could be as disarming and charming as that of any polished staff officer or as earthy and blunt as his native Ozarks. He could disagree with his critics without seeming abrasive. Little known outside the Air Force when he was named chief of staff, he was sometimes called “the brain” within it. He had a “steel-trap” mind with a gift for staff work and organizational leadership.

Although McConnell's years as chief of staff were difficult, they could be considered largely successful. The Air Force got new planes on the drawing boards and into service, and planning advanced for new strategic weaponry. The general made known his thoughts on combat strategy—which included increasing the number of targets to reduce U.S. ground casualties—and always emphasized his belief in civilian control of the military.

Following retirement in August 1969, General McConnell accepted the position of executive consultant to the Civil Air Patrol, providing executive-level advice on Patrol affairs dealing

with organization, administration, and overall policy. He was no stranger to that organization because he and the late Senator Burnet Rhett Maybank (D.-S.C.) had written the original public law passed by Congress in 1948 making the Civil Air Patrol an auxiliary of the Air Force. General McConnell also served on various corporate boards of directors, including the aerospace board of Hayes International Corporation. On November 21, 1986, McConnell died of cancer at the Carriage Hill Nursing Home in Bethesda, Maryland.

Gen. John D. Ryan

August 1, 1969–July 31, 1973

Gen. John D. Ryan

August 1, 1969–July 31, 1973



Portrait by Lloyd Bowers Embrey



JOHAN D. RYAN was born on December 10, 1915, in Cherokee, Iowa. He was the youngest of five children, and his father was a railroad worker for Illinois Central. Ryan graduated from Wilson High School in 1932 and two years later from Cherokee Junior College, both in Cherokee. Following his junior college graduation, he entered the United States Military Academy and graduated there in 1938. While at the academy he was known by football experts as one of West Point's outstanding players. He was always ready in the clutch. He often recovered the fumble that turned the game around, caught the key pass that set up the touchdown, or kicked the extra point that broke the tie. He was noted for playing extremely well under pressure. He played hard and often went both ways—on offense and defense—and was respected as a true team player. For his prowess on the gridiron he was selected in December 1962 as a member of the *Sports Illustrated* Silver Anniversary All-American Team.

Ryan attended flying school at Randolph and Kelly Fields, Texas, and received his pilot's wings in 1939. He remained at Kelly Field as a flight instructor for two years. From January 1942 until August 1943 he directed training at Midland Army Air Field, Texas, and was instrumental in establishing an advanced bombardier training school. As a lieutenant colonel he next became operations officer for the Second Air Force at Colorado Springs, Colorado. As a colonel in February 1944 he transferred to Italy, where he commanded the 2d Bombardment Group and later became operations officer for the 5th Bombardment Wing, Fifteenth Air Force, which participated in the campaigns in southern France and the Northern Apennines, the Rhineland, and Central Europe. Colonel Ryan flew fifty-eight missions in B-17 bombers and was awarded the Silver Star, Distinguished Flying Cross, Air Medal, and Purple Heart.

After returning to the United States in April 1945, Ryan became deputy air base commander at Midland Army Air Field. In September 1945 he was assigned to the Air Training Command at Fort Worth and Randolph Field, Texas, where he remained until April 1946, when he assumed duties with the 58th Bombardment Wing. He then became Eighth Air Force director of operations. For the next three years he commanded the 509th Bombardment Wing at Walker Air Force Base, New Mexico. Ryan was promoted to temporary brigadier general in September 1952, and between July 1951 and June 1956 commanded the 97th Bombardment Wing

and the 810th Air Division, both at Biggs Air Force Base, Texas, and the 19th Air Division at Carswell Air Force Base, Texas.

General Ryan became director of materiel for SAC in June 1956 and four years later assumed command of SAC's Sixteenth Air Force in Spain. In July 1961 he was named commander of the Second Air Force at Barksdale Air Force Base, Louisiana.

In August 1963 General Ryan was assigned to the Pentagon as inspector general for the United States Air Force. A year later he was named vice commander in chief of SAC, and in December 1964 he became its commander in chief. He was assigned as commander in chief, Pacific Air Forces, in February 1967. Ryan was appointed vice chief of staff of the U.S. Air Force in August 1968 and chief of staff in August 1969. When he took over as chief of staff, he was the first chief who had become a general officer during his postwar career.

Like his predecessor General McConnell, Ryan served as chief of staff of the Air Force during one of the country's most troubled eras. The war in Southeast Asia demanded a large and capable Air Force, and the constant strategic threat of the Soviet bloc required attention. Ryan's jobs included reconciling these threats with limited budgets and explaining Air Force policy to a divided Congress.

General Ryan wanted Air Force personnel to support two of his basic and long-held goals—to provide for the “security of this country and to help create a world environment in which other free countries can survive and prosper.” He noted that in the period since those goals had been established, significant political, economic, and social changes had taken place on the international scene. Initially, he recognized the shift in international power balance—the military strength of the United States and the Soviet Union had reached a level of parity. Furthermore, members of traditional alliances were pursuing more independent policies, and evidence of growing instability resulting from economic and social pressures was making weaker nations more vulnerable to militant insurgency. He recognized the pressure in the United States to reduce military programs and allocate resources to domestic programs. To counteract these trends he sought better methods of performing Air Force missions by introducing improved equipment such as the AMSA—the advanced manned strategic aircraft or the bombers for strategic forces, the all-jet strategic airlift mission performance in the overseas deployment and resupply of combat forces—and advanced satellite systems for tactical and strategic reconnaissance, and by developing a tactical satellite communications system to keep in touch more effectively with U.S. military forces around the world.

General Ryan made many difficult decisions during his tenure but perhaps none as difficult as those he made during the Lavelle affair. Ryan found it necessary for the commander of the Seventh Air Force, Gen. John D. Lavelle, to resign because the Inspector General reported that men under Lavelle's command had falsified reports in Vietnam. Ryan recommended that Lavelle be retired as a lieutenant general, but the Senate Armed Services Committee would not advance Lavelle beyond major general on the retired list.

Ryan also was involved in the continuing development of missile technology and the increasingly complex challenge of arms control and the simultaneous need for new generations of interceptors, attack planes, and bombers. During his tenure as chief, he endured the death of his eldest son, Capt. John D. Ryan, Jr., USAF, who was killed in 1970 when the F-4D fighter-bomber he was flying crashed on takeoff in California. His second son, Michael E. Ryan, would become Air Force chief of staff in November 1997.

General Ryan received honorary doctor of laws degrees from Creighton University in Omaha, Nebraska, and from the University of Akron, Ohio. In retirement Ryan remained involved with Air Force activities as a director of the Air Force Association. He died on October 27, 1983, at Wilford Hall Medical Center, Lackland Air Force Base, Texas.

Gen. George Scratchley Brown

August 1, 1973–June 30, 1974

Gen. George Scratchley Brown

August 1, 1973–June 30, 1974



Portrait by Maxine McCaffrey



GEORGE SCRATCHLEY BROWN was born in Montclair, New Jersey, on August 17, 1918. He was the son of a West Point graduate and career cavalry officer. He graduated from high school in Leavenworth, Kansas, and, after attending the University of Missouri for a year, he received a congressional appointment to the U.S. Military Academy in 1937. He graduated from West Point in 1941 and entered flight training at Pine Bluff, Arkansas. He received his pilot's wings at Kelly Field, Texas, in 1942.

Following flight training, he went to Barksdale Field, Louisiana, where he became a member of the initial cadre of the 93d Bombardment Group, flying B-24 Liberators. After a brief stint flying antisubmarine patrol at Ft. Myers, Florida, he transferred in August 1942 with the 93d Bombardment Group, the first B-24 group to join the Eighth Air Force in England. Until April 1944 he served in various capacities with the 93d, including commander of the 329th Bombardment Squadron, group operations officer, and group executive officer. As group executive officer, he took part in famous low-level bombing raids against oil refineries at Ploesti, Romania, on August 1, 1943. The 93d was the second of five B-24 groups that raided Ploesti from a temporary base at Benghazi, Libya. Led by its commander, Lt. Col. Addison E. Baker, the 93d flew directly into heavy defenses to hit three of the six targeted refineries. The lead plane and ten others were shot down or crashed on the target. Brown, then a major, took over lead of the battered 93d and led it back to Benghazi. For his actions on that mission, he received the nation's second highest military award, the Distinguished Service Cross.

His next appointment was as assistant operations officer, 2d Air Division, in May 1944. The following May he assumed similar duties with Headquarters Air Training Command at Fort Worth, Texas. In 1946 he joined Headquarters Air Defense Command at Mitchel Field, New York, as assistant to air chief of staff, operations and later became assistant deputy of operations.

In July 1950, during the Korean War, Brown assumed command of the 62d Troop Carrier Group at McChord Air Force Base, Washington. This group operated between the West Coast and Japan. In 1951 and the early months of 1952 he commanded the 56th Fighter Wing at Selfridge Air Force Base, Michigan, and in May 1952 joined Fifth Air Force headquarters at Seoul, Korea, as director for operations.

In July 1953 Colonel Brown assumed command of Williams Air Force Base, Arizona. He entered the National War College in 1956 and, after completing the course in 1957, he served as executive to the chief of staff, Headquarters U.S. Air Force until 1959. During the next four years, he held two other positions at the Pentagon: military assistant to the deputy secretary of defense and military assistant to the secretary of defense.

Promoted to brigadier general in August 1959, Brown became commander of the Eastern Transport Air Force, McGuire Air Force Base, New Jersey, in August 1963. In September of the next year he was selected to organize Joint Task Force II, a Joint Chiefs of Staff (JCS) unit formed at Sandia Base, New Mexico, to test the weapon systems of all the military services.

He served as assistant to the chairman of the Joint Chiefs of Staff in Washington, D.C., from August 1, 1966, to August 1, 1968, when he assumed command of the Seventh Air Force and became deputy commander of air operations, U.S. Military Assistance Command, Vietnam. In September 1970 General Brown became commander of the Air Force Systems Command at Andrews Air Force Base, Maryland. It was the mission of this command to provide the weapon systems and meet the technological needs of the total Air Force mission.

On August 1, 1973, President Richard M. Nixon appointed Brown to be chief of staff of the Air Force. As chief, General Brown worked to enhance the Air Force strategic bomber program and to replace the aging B-52s with B-1s, which could carry larger payloads and penetrate deeper into the USSR.

On July 1, 1974, President Nixon appointed General Brown chairman of the JCS, the first Air Force officer since Gen. Nathan Twining to hold the position. As chairman, Brown served three presidents during an era of limited budgets and constrained force structure. In 1974 he provoked an international controversy by asserting that Jews “own the banks and the newspapers in this country.” After making these remarks at a gathering at Duke University Law School, he was called to the White House by President Gerald R. Ford and rebuked. General Brown issued an apology. Acknowledging that Brown had made a mistake, Ford opted to keep Brown on as JCS chairman because of his excellent record as an officer.

Two years later General Brown got into trouble again by saying that Israel had become a military burden to the United States and by making deprecatory remarks about Britain and Iran. Of Britain he said, “It’s pathetic now; it just wants to make you cry. They’re no longer a world power. All they have got are generals, admirals, and bands. They do things in great style . . . on the protocol side. But it makes you sick to see their forces.” On Iran: “Gosh, the (military) program the shah has coming. . . . It just makes you wonder whether he doesn’t some day have visions of the Persian Empire.” Later General Brown said his remark about Israel referred to a partial depletion of U.S. military equipment stocks to resupply Israel after the 1973 Arab-Israeli war. He also praised the British for their gallantry and professionalism and said he had no reason to believe that the shah of Iran planned to do anything other than lead his country properly.

As chairman, much of his time was consumed with Strategic Arms Limitation Treaty talks that focused on finding a formula by which the U.S. lead in missile reentry vehicles would offset Soviet superiority in missile throw-weight. Brown led the Joint Chiefs in urging U.S. air and naval deployments to South Vietnam following the U.S. pullout. But public and congressional opposition to any further involvement in Vietnam precluded approval of any military action. General Brown also participated in decision making over the U.S. response to two confrontations in the Far East that were widely perceived as tests of U.S. will in the aftermath of the communist takeover of South Vietnam. These were the *Mayaguez* incident in May 1975 and the shooting of two U.S. officers and wounding of another by North Korean guards in August 1976 in the demilitarized zone that divided the two Koreas. He also played a significant role in the success of the 1977 negotiations transferring the Panama Canal to Panama.

General Brown survived the furor that followed his sometimes controversial remarks and continued as chairman until his retirement in June 1978. He had contracted prostate cancer and was hospitalized intermittently until his death in December 1978. His military career spanned a technological revolution in weaponry. He started his combat career by flying heavy bombers in the European theater in World War II and retired as a four-star general when the cruise missile rivaled the manned bomber.

At the time of General Brown's death, Secretary of Defense Harold Brown maintained that "this nation has lost a great patriot and an innovative chairman of the Joint Chiefs of Staff. He was a pioneer as an Air Force officer. He was a sincere, straightforward, and dedicated man. He was a friend."

Gen. David Charles Jones

July 1, 1974–June 20, 1978

Gen. David Charles Jones

July 1, 1974–June 20, 1978



Portrait by Robert L. Scharr



DAVID CHARLES JONES was born in Aberdeen, South Dakota, on July 9, 1921. Growing up in Minot, North Dakota, he often rode his bicycle to a nearby airfield and fantasized about becoming a combat pilot. Following graduation from the local high school, he attended the University of North Dakota and Minot State College. In April 1942 he left college to join the U.S. Army Air Corps and received his commission and pilot's wings in February 1943.

After serving as a flying instructor in New Mexico, Arizona, and Texas, Lieutenant Jones was assigned to the 3d Emergency Rescue Squadron of the Fifth Air Force in Japan in 1945. He began as a unit pilot, flying Catalina flying boats, and rose to command the squadron. He was promoted to captain in April 1946. From 1948 to 1949 Jones was a unit instructor and then assistant operations and training officer with the 2236th Air Force Reserve Training Center, Godman Field, Kentucky. Also during this period, he attended the Air Tactical School at Tyndall Air Force Base, Florida; the Atomic Energy Course at Keesler Air Force Base, Mississippi; and the Armed Forces Special Weapons Course at Sandia Base, New Mexico.

Jones was assigned to the 19th Bombardment Squadron at March Air Force Base, California, in January 1950 and promoted to major in February 1951. During his three-and-one-half years with the 19th, he rose to aircraft commander, then operations officer, and finally commander of the squadron. He flew more than three hundred hours on combat missions over North Korea, when the squadron was one of the first bombardment units committed to the Korean War. In May 1953 he transitioned from bombers to tankers, taking command of the 22d Air Refueling Squadron at March Air Force Base. Promoted to lieutenant colonel in June 1953, he remained at March but returned to bombers the following year as commander of the 33d Bombardment Squadron.

Jones next served at Headquarters Strategic Air Command (SAC), Offutt Air Force Base, Nebraska, during SAC's build-up period. He was assigned initially in September 1954 as an operations planner in the bomber mission branch and remained there until January 1955, when Gen. Curtis E. LeMay selected him as his aide. Promoted to colonel in April 1957, Jones became director of materiel and later deputy commander for maintenance of SAC's 93d Bombardment Wing at Castle Air Force Base, California. Following a stint at the

National War College in 1960, Jones was assigned to the Air Staff's operations directorate for four years. As chief of the manned systems branch, he worked on the B-70 bomber project. He then served as deputy chief and chief of the Strategic Division. After F-100 and F-4 training, Jones assumed command of the 33d Tactical Fighter Wing, Eglin Air Force Base, Florida, at its activation in 1965 and brought it to operational status.

Jones then served in key staff assignments with U.S. Air Forces Europe (USAFE). In October 1965 he became USAFE inspector general, responsible for inspecting units at more than ninety installations in ten countries. He was promoted to brigadier general in December 1965. In January 1967 he became USAFE chief of staff and, in June, deputy chief of staff for plans and operations. He received his second star in November 1967.

In February 1969 Jones was assigned to Headquarters Seventh Air Force, Tan Son Nhut Airfield, Republic of Vietnam, as deputy chief of staff for operations and became vice commander in June. Promoted to lieutenant general, he returned to SAC in August 1969 as commander of the Second Air Force, headquartered at Barksdale Air Force Base, Louisiana. In April 1971 General Jones returned to USAFE as vice commander in chief. He assumed command of USAFE and the Fourth Allied Tactical Air Force in August and was promoted to general in September. In his North Atlantic Treaty Organization (NATO) capacity as commander of the Fourth Allied Tactical Air Force, General Jones directed an international planning team that integrated central region air forces into a more cohesive organization. Key to that effort was his creation of a small operational and planning headquarters, Allied Air Force, Central Europe.

Capping a career that had included operational and command positions in bomber, tanker, training, and tactical fighter units as well as headquarters staff positions, General Jones became chief of staff of the Air Force in July 1974. A major theme throughout his tenure was "readiness." He concluded that in any future conflict the United States was unlikely to enjoy the past luxury of long "acceleration lanes" in which "to mobilize, train, and deploy the cutting edge of our combat capability." He noted that because our nonexpansionist foreign policy tends to concede the initiative to an aggressor, "we have to remain perpetually ready for a come-as-you-are conflict." Therefore, to face the reality of a more ready and efficient if not austere Air Force, General Jones pursued a policy of developing high-technology weapons systems. In addition, he reorganized the Air Force command structure and substantially reduced headquarters staffs. He supported modernization with such systems as the F-15 and F-16, the A-10, and the EA-3A (AWACS). Much of the modernization program was focused on the European area, where the United States developed initiatives in response to Department of Defense and congressional interest for an increase in the capability of NATO.

After four years as chief of staff of the Air Force, General Jones became President Jimmy Carter's nominee to the ninth chairmanship of the Joint Chiefs of Staff (JCS). The only chairman who was not a college or service academy graduate, Jones presided over the JCS during a period of increasing Soviet military power and the emergence of militant Islam as a threat to

pro-Western regimes in the Persian Gulf region. During his tenure as chairman, defense funding increased in response to the Soviet threat and continuing JCS advocacy of strategic force modernization despite progress on strategic arms control.

Jones accompanied President Carter to Vienna, Austria, in June 1979 for the final stage of the Strategic Arms Limitation Treaty (SALT) II negotiations with the USSR. When the Soviet invasion of Afghanistan raised fears that Soviet forces there might move into neighboring Iran, where an anti-Western militant Islamic regime had taken power in early 1979, President Carter created a rapid deployment force (RDF) for Southwest Asia to counter any such attempt in the region. Subsequently, at the direction of the secretary of defense, General Jones oversaw planning for the transformation of the RDF into a regional unified command. The planning for what in 1983 became the U.S. Central Command was essentially completed during his chairmanship.

Jones also oversaw the planning for the rescue of the U.S. embassy personnel taken hostage in November 1979 by followers of the Iranian leader Ayatollah Ruholla Khomeini, and he survived the criticism for that rescue mission's failure. During his second term as chairman, Jones worked to make the chairman, rather than the corporate JCS, the principal military adviser to the president and the secretary of defense, arguing that such a change of the National Security Act would improve the quality and timeliness of military advice and the combined readiness and effectiveness of the nation's combat forces. Jones continued his efforts toward that goal after his retirement as chairman of the JCS and saw it come to fruition with the passage of the Goldwater-Nichols Department of Defense Reorganization Act in 1986.

Gen. Lew Allen, Jr.

July 1, 1978–June 30, 1982

Gen. Lew Allen, Jr.

July 1, 1978–June 30, 1982



Portrait by John G. Bonner



LEW ALLEN, JR. was born on September 30, 1925, in Miami, Florida. He graduated from high school in Gainesville, Texas, in 1942 and entered the U.S. Military Academy at West Point, New York, the following year. He graduated in 1946 with a bachelor of science degree and a commission as a second lieutenant. During his West Point summers, he took primary flying training at Chickasha, Oklahoma, where he flew the PT-17 and the Stearman, and completed advanced training at Stewart Field. He was awarded pilot's wings at graduation from West Point.

When he completed multiengine flight training in November 1946, Lieutenant Allen was assigned to Strategic Air Command's (SAC's) 7th Bombardment Group at Carswell Air Force Base, Texas, where he flew B-29s and B-36s and served in various positions related to nuclear weaponry. He was among the first class of qualified nuclear weaponeers in the Air Force. Allen attended the Air Tactical Course at Tyndall Air Force Base, Florida, and returned to Carswell as an instructor and assistant special weapons officer for the 7th Bombardment Wing. In his four years at SAC, he witnessed its astounding dramatic change from a very poor and unprofessional entity to a very disciplined and professional organization under the leadership of Gen. Curtis E. LeMay.

In September 1950 he entered the University of Illinois for graduate training in nuclear physics and received a master of science degree in 1952. He earned a doctorate degree in physics in 1954 after completing an experimental thesis on high-energy photonuclear reactions. Captain Allen was then assigned to the Atomic Energy Commission's Scientific Laboratory at Los Alamos, New Mexico, as a physicist in the test division. At this assignment he conducted experiments in several of the nuclear test series at Bikini and in Nevada. He was given an unusual degree of responsibility and independence and actually was one of the last military officers assigned to the laboratories strictly as a scientist. While at Los Alamos he gained a reputation for competence in a multidisciplinary field and was involved in testing the vulnerability of nuclear weapons to other nuclear weapons.

From June 1957 to December 1961 Major Allen was stationed at Kirtland Air Force Base, New Mexico, as a science adviser to the physics division of the Air Force Special Weapons Center. He focused his attention on the military effects of high-altitude nuclear explosions and

participated in several weapons test series. He was the scientific director of a major experiment that used high-altitude rockets to measure the characteristics of electrons trapped in the geomagnetic field after an exoatmospheric nuclear burst.

His tours at Los Alamos and Kirtland placed Allen in a working relationship with a number of prominent people in the nuclear weapons community. Among them was Harold Brown, the director of the Livermore Laboratory, the counterpart to Los Alamos. Under President John F. Kennedy, Brown became the director of defense research and engineering in the Office of the Secretary of Defense and subsequently asked Allen to join his office. As a result, in December 1961 Allen was assigned to the Office of the Secretary of Defense, space technology office, in Brown's directorate, where he remained until 1965.

From 1965 to 1973 Allen was assigned to the Office of the Secretary of the Air Force, initially in Los Angeles as deputy director for advanced plans in the directorate of special projects. He moved to the Pentagon in June 1968 as deputy director of space systems and became director twelve months later. Allen returned to Los Angeles in September 1970 as assistant to the director of special projects and in April 1971 became director of special projects, with additional duty as deputy commander for satellite programs, Space and Missile Systems Organization. He witnessed the demise of the Dyna-Soar program and became involved with the Manned Orbital Laboratory program. He also participated in the Blue Gemini program, devising experiments for a version of the space vehicle that lacked a laboratory.

Allen served a twenty-eight-day stint as General Brown's chief of staff for Air Force Systems Command at Andrews Air Force Base, Maryland. Thereafter, James Schlesinger—whom Allen had known from the Office of Management and Budget, which often reviewed Allen's space programs—offered him an assignment as one of Schlesinger's deputies at the Central Intelligence Agency. General Brown agreed to let Allen go in March 1973, and Allen served with Schlesinger until August. When Schlesinger was appointed as secretary of defense, he named General Allen to be the director of the National Security Agency and chief of central security service at Fort George G. Meade, Maryland.

In August 1977 Allen was named commander of Air Force Systems Command. Given his background in research and development, that assignment was a very comfortable fit. At Systems Command he worked on acquisitions that stemmed from the upgrade of the tactical forces following the conflict in Vietnam. Indeed, Allen oversaw the later stages of an intensive effort to upgrade the USAF's tactical forces through acquisition of the C-5, A-10, and F-16. Allen left Systems Command in April 1978 to take over as vice chief of staff of the Air Force and became chief of staff three months later. His appointment as chief was entirely unexpected because he had followed an unusual career path: he never had an overseas or a combat assignment, and most of his jobs were in highly specialized activities rather than in the basic line of the Air Force. Characteristically, Allen looked forward to the challenge.

Among the dominant issues Allen dealt with during his first two years as chief were the attitude, morale, and discipline of Air Force personnel. It was the era of the “Hollow Force” Air Force, when gross underfunding across the range of USAF activities—from operations and maintenance to morale, welfare, and recreation—caused adversities that reduced morale of the entire Air Force. Indeed, budgetary retrenchment, which limited flying hours, caused disgruntlement among pilots. Pilots claimed they were not receiving the training and experience to warrant the Air Force’s definition of them as fully proficient defenders. Working with his commanders, Allen was able to secure additional funding to increase flying hours, especially for the Tactical Air Command, and to turn around the pilot retention issue that resulted from the poor morale climate.

General Allen got along well with all three of the Air Force secretaries with whom he worked—John C. Stetson, Hans M. Mark, and Verne Orr. To General Allen, Secretary Orr was a “charming and vigorous gentleman who was characterized as much as anything else by an immediate and total dedication to the Air Force.” As chief, Allen worked closely with the Army on doctrinal issues, “attempting to improve the rationalization of the approaches of the two services into a common doctrine.”

Throughout his tenure Allen supported improvements that would increase the national combat capability, including survivability of strategic forces, enhanced combat readiness and sustainability of general-purpose forces, and expanded airlift capacity. Essential to these goals was having adequate numbers of experienced, motivated people to staff and maintain those weapon systems. While stressing the rebuilding of the nuclear deterrent forces, he pursued the improvement of general-purpose forces to counter the steadily expanding Soviet conventional capabilities.

Like the other services in the early 1980s, the Air Force “rode the crest of President Ronald Reagan’s wave” of support for defense spending. By the end of his tour as chief, General Allen could point to some significant progress in correcting long-standing deficiencies in the forces and in improving defense capabilities. Speaking in support of continued attention to national goals, Allen maintained that “we must stay the course” even though it would not be easy. “We can and must afford the cost. We cannot afford the weakness and loss of credibility that a failure to stand up to the Soviet challenge in this dangerous decade” would entail.

After retiring from the Air Force in June 1982, Allen became director of the Jet Propulsion Laboratory at the California Institute of Technology in Pasadena, California, and remained there until 1990. The next year he became chairman of the board of Draper Laboratory in Boston, Massachusetts.

Gen. Charles A. Gabriel

July 1, 1982–June 30, 1986

Gen. Charles A. Gabriel
July 1, 1982–June 30, 1986



Portrait by Peter Egeli



CHARLES A. GABRIEL was born on January 21, 1928, in Lincolnton, North Carolina. After graduating from high school, he attended Catawba College in Salisbury, North Carolina, where he was an outstanding football quarterback for two years before entering the U.S. Military Academy at West Point, New York. He graduated from the academy in 1950 with a bachelor of science degree and a commission in the U.S. Air Force. In 1963 he earned a master of science degree in engineering management from George Washington University, Washington, D.C.

After West Point, Lieutenant Gabriel entered pilot training at Goodfellow Air Force Base, Texas, and in December 1951 completed advanced training at Craig Air Force Base, Alabama. He was assigned to South Korea, where he flew one hundred combat missions in F-51s and F-86s and was credited with shooting down two MiG-15s. From December 1952 to November 1955 he was assigned to the 86th Fighter Interceptor Wing, Landstuhl Air Base, Germany, as a pilot and later as a squadron air operations officer. He then spent three years as an air officer commanding at the U.S. Air Force Academy in Colorado.

In July 1959 Captain Gabriel transferred to Moody Air Force Base, Georgia, where he served as adjutant for the 3550th Pilot Training Group and commander of the Headquarters Squadron Section. Following graduation from the Naval War College in August 1962 and the completion of his master's degree in 1963, he was assigned as a staff officer in the Directorate of Plans, Headquarters U.S. Air Force, Washington, D.C. In August 1966 he entered the Industrial College of the Armed Forces.

One year later, Lieutenant Colonel Gabriel took on the role of executive officer to the chief of staff, Supreme Headquarters Allied Powers Europe, in Mons, Belgium. He returned to the United States for combat crew training in July 1970 and subsequently was assigned as commander of the 432d Tactical Reconnaissance Wing at Udorn Royal Thai Air Base, Thailand, where he flew 152 combat missions in F-4s. He returned to the Air Staff in July 1972 as deputy for operational forces and deputy director of operations.

General Gabriel served as deputy chief of staff for operations at Headquarters Tactical Air Command, Langley Air Force Base, Virginia, from February 1975 to August 1977. He then

became deputy commander in chief, U.S. Forces Korea, and deputy commander in chief, United Nations Command, Seoul, South Korea.

In April 1979 Gabriel returned to Air Force Headquarters as deputy chief of staff for operations, plans, and readiness. He served as commander in chief, United States Air Forces in Europe, and commander of Allied Air Forces Central Europe at Ramstein Air Base, West Germany, from August 1980 to June 1982. General Gabriel became chief of staff of the United States Air Force in July 1982.

At the outset of his tenure as chief of staff, Gabriel believed that his top priority was to take care of Air Force personnel and ensure that the service remained an “outstanding way of life.” Four years later he could point to substantial pay raises and enhancements in benefits as tangible results of his tenure. But he acknowledged that a wide gap remained between military and private-sector wages, and he noted that future Air Force leadership would have to remain vigilant in its efforts to bridge that chasm.

On May 22, 1984, General Gabriel and his Army counterpart, Gen. John A. Wickham, Jr., signed a landmark agreement on thirty-one joint initiatives that the Army and Air Force had identified as essential to development and “fielding of the most affordable and effective air–land combat forces.” The initiatives addressed a variety of joint concerns, including theater air interdiction, battlefield air interdiction, manned tactical reconnaissance systems, intratheater airlift, air base ground defense, point air defense, surface-to-air missiles, and rear area close air support. The agreement evolved from two years of working on budgets “to ensure coordination and reduce overlap in the acquisition and development of systems.” Hailed as a “revolutionary approach” to cooperation between the forces, the agreement formalized the “participation of each service in the other’s budget process” and committed them to a “long-term, dynamic process” to exchange, review, and update initiatives.

At the time of his retirement two years later, General Gabriel could point to the substantial cost savings resulting from his emphasis on joint programs. He saw the Unified Space Command as a positive step toward jointness that would ensure that all military space assets were coordinated in support of national objectives. He pointed out that although generous budgets allowed the building of a much stronger defense and a more confident posture for deterrence, fiscal austerity would likely be the future reality. Gabriel did not predict the return of the “Hollow Force” of the 1970s, but he cautioned that the plentiful defense budgets of recent years would be difficult to sustain.

Following his retirement in 1986, Gabriel became a member of the board of directors of several firms, including GEC Marconi Electronic Systems Corporation, E-Systems Inc., Electronic Systems Corporation, Riggs National Bank of Virginia, United Services Life Insurance Corporation, and the Jessup Group Incorporated. He also served as chairman of the board of directors for FLT International and JGW Associates, on the corporate advisory board of the Martin Marietta Company, as vice chairman of the board of advisors for Citadel College, and on the board of advisors to the Defense Intelligence College.

Gen. Larry D. Welch

July 1, 1986–June 30, 1990

Gen. Larry D. Welch

July 1, 1986–June 30, 1990



Portrait by Peter Egeli



LARRY D. WELCH was born on June 9, 1934, in Guymon, Oklahoma, and graduated from Liberal High School in Kansas in 1952. He enlisted in the Kansas National Guard in October 1951 and served with the 161st Armored Field Artillery until he enlisted in the U.S. Air Force. In November 1953 he entered the aviation cadet program and received his pilot's wings and a commission as a second lieutenant. He served initially as a flight instructor until his assignment in July 1958 to Headquarters Air Training Command, Randolph Air Force Base, Texas.

In 1962 Captain Welch went to Europe to serve as chief of the combat operations center for the 366th Tactical Fighter Wing and later as a pilot in the 389th Tactical Fighter Squadron. He returned to the United States to work as pilot, flight commander, and operations officer for the 389th Tactical Fighter Squadron at Holloman Air Force Base in New Mexico. As a major, Welch went in March 1966 to the Republic of Vietnam, where he was operations officer for the 389th Tactical Fighter Squadron stationed at Phan Rang Air Base and then chief of the operations and training division for the 366th Tactical Fighter Wing at Da Nang Air Base. While stationed in Vietnam he flew combat missions in F-4Cs over North and South Vietnam and Laos.

Returning stateside in February 1967, Welch attended the Armed Forces Staff College at Norfolk, Virginia, and then was assigned to Headquarters U.S. Air Force, Washington, D.C., as director of air superiority studies, fighter division, under the assistant chief of staff for studies and analysis. During this period, several of his academic pursuits came to fruition: he received a bachelor of arts degree from the University of Maryland in 1971 and a master of science degree from George Washington University, in Washington D.C., the following year, and he studied at the National War College in Washington, D.C., from August 1971 to July 1972.

In July 1972 he was assigned to Tactical Air Command. He served the command for two years, first as deputy commander for operations and then as vice commander, 35th Tactical Fighter Wing, at George Air Force Base, California. In September 1974 he became special assistant to the commander, Tactical Air Command, Langley Air Force Base, Virginia. The following August he took command of the First Tactical Fighter Wing at Langley.

In August 1977, one month after receiving his first star, General Welch became inspector general, Tactical Air Command, and in October of that year he became deputy chief of staff of

plans. Remaining at Langley, Welch assumed the duties of deputy chief of staff of operations at Tactical Air Command in March 1979. In June 1981, after nearly seven years at Langley, he transferred to Shaw Air Force Base, South Carolina, as commander of the Ninth Air Force and component commander for the Rapid Deployment Joint Task Force.

In November 1982 Welch went to Headquarters U.S. Air Force in Washington, D.C., as deputy chief of staff for programs and resources, and in August 1984 he became vice chief of staff of the U.S. Air Force. From August 1985 to June 1986 he served as commander in chief, Strategic Air Command, and director of Joint Strategic Target Planning Staff at Offutt Air Force Base, Nebraska. He became the Air Force chief of staff on July 1, 1986.

At the beginning of his tenure as chief, General Welch was concerned about the inability of the U.S. strategic deterrent force to retaliate promptly against “hardened Soviet nuclear forces” and command and control assets. He made the strategic force issues one of his top priorities. He saw the Peacekeeper ICBM as the only solution, with the deployment of one hundred of these missiles representing to him “the essential, rational foundation for an affordable force to deal with Soviet offensive forces.” He saw the B-1B as a superb bomber that would serve for future years, first as a penetrating bomber and later as a cruise missile carrier. Welch believed the advanced technology bomber (ATB), or Stealth, would continue the bomber penetration role well into the next century. He supported a management philosophy that featured decentralized authority and responsibility accomplished by placing one supervisor in full control of “one piece” of the Air Force mission. “Full control,” he maintained, extended “from authority and resources to accountability.”

Like some of his predecessors, he considered motivating people to be another of his top priorities. He noted that “whatever progress the Air Force [made] in combat readiness and combat capability [was] derived from the fact that [the Air Force] has high-quality people.”

Recalling his experience with “joint initiatives” when he served as Gen. Charles A. Gabriel’s vice chief of staff and deputy chief of staff for programs and resources, Welch held that “there is absolutely no question that we will continue the ‘joint initiatives’ with the other services.” He believed that it was natural to pursue joint initiatives, especially because they had been very successful, “having saved both the Air Force and the Army a lot of money.”

Two years later, when the USSR professed a more open attitude toward the West, as expressed by Mikhail Gorbachev’s policies of *glasnost* and *perestroika*—or openness and restructuring—Welch urged that the United States remain strong in order to keep pressure for such change on the Kremlin. He added that it was the strength of the free world that brought the Soviets to the arms negotiation table: “It is the success of our system of alliances and the strategy of deterrence that leads the Soviets to conclude they cannot afford to build the military forces needed to impose their will on the free world.” Welch saw that the federal deficit was becoming a major national concern and that “a smaller defense budget is seen by some as a major means of reducing that deficit.” In response to that theory, Welch declared that “neither

facts nor logic lead to a conclusion that the deficit is caused by increases in defense spending or is likely to be cured by the decreases in defense spending.” Near the end of this tenure he saw little relief for his successor, maintaining that the Soviet phasedown brought to a head all the clichés about air power and the need to reexamine budgets accompanied by congressional pressure to spend the so-called “peace dividend.” On June 30, 1990, General Welch—longtime fighter pilot, Vietnam combat veteran, former commander in chief of SAC, and defender of Air Force roles and missions in the face of severe fiscal restraints—retired.

After leaving the Air Force, Welch became president and chief executive officer of the Institute for Defense Analysis in Washington, D.C., a federally chartered research center providing both operations and technical analysis and management and information systems design and development to the Department of Defense and other U.S. government agencies. He also served as director of the Aerospace Education Foundation and of the Air Force Academy Foundation. In addition, he chaired the Joint Committee on Nuclear Weapons Surety and the President’s Security Policy Advisory Board, and he was a member of the Commission to Assess the Ballistic Missile Threat to the United States and of the Defense Intelligence Agency Science and Technology Advisory Board.

Gen. Michael J. Dugan

July 1, 1990–September 17, 1990

Gen. Michael J. Dugan

July 1, 1990–September 17, 1990



Portrait by George Pollard



MICHAEL J. DUGAN was born on February 22, 1937, in Albany, New York. He received a high school diploma from Saint Peter's Academy in Saratoga Springs, New York, and then entered the U.S. Military Academy. He graduated in 1958 with a bachelor of science degree. He then completed the Air Force primary, basic, and advanced flying training schools. After a four-year stint with the 79th Tactical Fighter Squadron in England, where he flew F-100s, and a two-year stateside tour at Eglin Air Force Base in Florida as an A-1 pilot, he went to Pleiku Air Base in the Republic of Vietnam in January 1967 as an A-1E pilot for the 1st Commando Squadron.

From November 1967 to November 1972 Dugan was stationed at the Air Force Academy, serving in several assignments including air officer commanding. In 1972 he earned a master of business administration degree from the University of Colorado in Boulder and attended the Air Command and Staff College. The following year he studied at the Air War College at Maxwell Air Force Base, Alabama.

From June 1973 to July 1977 Colonel Dugan was assigned to Headquarters U.S. Air Force, Washington, D.C., first as an action officer and branch chief in the office of the deputy chief of staff, plans and operations, and then as executive to the vice chief of staff. He next served at Davis-Monthan Air Force Base, Arizona, as vice commander and later commander of the 355th Tactical Fighter Wing. Dugan subsequently became commander of the 23d Tactical Fighter Wing, England Air Force Base, Louisiana, and commander of the 832d Air Division at Luke Air Force Base, Arizona.

In May 1982 he moved to Langley Air Force Base, Virginia, where he served successively as Tactical Air Command's assistant deputy chief of staff for operations, inspector general, and deputy chief of staff for operations. He was assigned to the office of the deputy chief of staff for plans and operations at Air Force Headquarters and worked as director of operations starting in June 1986 and as assistant deputy chief of staff beginning in January 1987. Seven months later he became Air Force deputy chief of staff for programs and resources and held that position until he became deputy chief of staff for plans and operations in March 1988. The following April Dugan went to Europe as commander in chief, U.S. Air Forces in Europe, and

commander, Allied Air Forces Central Europe, at Ramstein Air Base, West Germany. In July 1990 he replaced General Welch as chief of staff of the U.S. Air Force.

General Dugan's primary goal was to eliminate boundaries, and to that end he was intent on integrating functions, opening communications, and solving problems. Outgoing and personable, Dugan was especially interested in facilitating communications and "spreading the word" both inside and outside of the Air Force. One of his initiatives was the "Latest Word" message, in which he used three monthly messages to field personnel to provide correct information in advance of the media, hopefully to eliminate fear, anxiety, or uncertainty with respect to possible manpower cutbacks and the threat of war.

In an effort to improve communications with the media, Dugan provided them with an "On Target" program that listed the key Headquarters U.S. Air Force officials who were competent to discuss all Air Force issues. His effort to be more communicative with the media and the public prematurely ended his tenure as chief of staff of the Air Force. In the midst of the Operation Desert Shield deployment, he flew to Saudi Arabia on an inspection and took several members of the Air Staff and three reporters on his aircraft. He granted interviews to the reporters during the trip. Subsequently, Secretary of Defense Richard Cheney and Joint Chiefs of Staff Chairman Gen. Colin C. Powell objected to some of his comments, reported in the media, on the status of U.S. forces and future operations in the Persian Gulf. Cheney relieved Dugan as chief of staff effective September 17, 1990, although he remained on active duty as a special assistant to Secretary of the Air Force Donald B. Rice until January 1991. At the time of his departure, Dugan penned the following message: "To the men and women of the Air Force—Your mission—providing air power and space power to the nation—is essential and enduring. I bid you a fond farewell with my head high, my Mach up, and my flags flying. Good luck, good hunting, and Godspeed to the greatest Air Force in the world."

After his retirement from the Air Force, Dugan lectured for several years on strategic studies at Johns Hopkins University in Baltimore, Maryland. In 1992 he became president of the National Multiple Sclerosis Society. He has also served occasionally as an expert on military matters for the national media.

Gen. Merrill A. McPeak

October 30, 1990–October 25, 1994

Gen. Merrill A. McPeak

October 30, 1990–October 25, 1994



Portrait by Pamela Firestone Bowman



MERRILL A. McPEAK was born on January 9, 1936, in Santa Rosa, California. After graduating from Grants Pass Union High School in Oregon, he earned a bachelor of arts degree in economics from San Diego State College in 1957. He was a distinguished graduate of the Air Force Reserve Officer Training Corps program in college and entered the Air Force in November 1957, completing pilot training at Hondo Air Base, Texas, and Vance Air Force Base, Oklahoma. He received his pilot's wings in November 1957 and then completed F-100 combat crew training at Luke Air Force Base, Arizona, and Nellis Air Force Base, Nevada.

His first operational assignment was flying F-104 Starfighters with the 436th Tactical Fighter Squadron, George Air Force Base, California. He subsequently transferred to the 79th Tactical Fighter Squadron, 20th Tactical Fighter Wing, Royal Air Force Station, Woodbridge, England, where he flew F-100 Super Sabres. From May 1964 until August 1965 he was a member of the Third Air Force Tactical Evaluation Team, exercising and evaluating pilots and operations units in the United Kingdom.

In September 1965 McPeak returned to Luke Air Force Base as a gunnery instructor and later served as wing weapons officer for the F-104G program. That assignment involved training pilots in West Germany's Luftwaffe. From December 1966 to December 1968 McPeak flew the solo and lead solo positions with the U.S. Air Force Air Demonstration Squadron, the Thunderbirds. He performed in nearly two hundred official air shows in the United States and abroad.

In December 1968 Major McPeak went to the Republic of Vietnam, serving first as an F-100 tactical fighter pilot with the 37th Tactical Fighter Wing, Phu Cat Air Base, and then as operations officer and later commander of the "Misty" high-speed forward air controller unit. His unit subsequently was assigned to the 31st Tactical Fighter Wing at Tuy Hoa Air Base, where he served as chief of the wing standardization and evaluation branch. He flew 269 combat missions during his tour of duty in Vietnam.

Returning stateside in January 1970, McPeak attended the Armed Forces Staff College and graduated in July of that year. He then spent three years as an air operations staff officer in the directorate of plans and policy, Headquarters U.S. Air Force in Washington, D.C. He completed

the National War College program in June 1974 and concurrently earned a master's degree in international relations at George Washington University. He next was assigned as assistant deputy commander for operations of the First Tactical Fighter Wing, MacDill Air Force Base, Florida.

As a colonel he was a military fellow at the Council on Foreign Relations in New York City from July 1975 to June 1976. He then commanded the 513th Combat Support Group, Royal Air Force Station in Mildenhall, England, and in July 1977 he became vice commander of the 406th Tactical Fighter Training Wing, Zaragoza Air Base, Spain. From July 1978 to February 1980 Colonel McPeak was assistant chief of staff of current operations, Allied Air Forces Central Europe, at the Central Region Air Operations Center, Boerfink, West Germany. He then assumed command of the 20th Tactical Fighter Wing, Royal Air Force Station Upper Heyford, England. In July 1981, shortly after being assigned as chief of staff at Headquarters U.S. Air Forces in Europe at Ramstein Air Base, West Germany, McPeak was promoted to brigadier general.

In October 1982 he became deputy chief of staff of plans at Headquarters Tactical Air Command, Langley Air Force Base, Virginia. When he was promoted to lieutenant general in May 1985, he set out for Washington, D.C., as deputy chief of staff of programs and resources at Headquarters U.S. Air Force. In June 1987 he assumed command of the Twelfth Air Force and U.S. Southern Command Air Forces at Bergstrom Air Force Base, Texas. During the summer of 1988, he was promoted to general and assumed command of the Pacific Air Forces headquartered at Hickam Air Force Base, Hawaii. Two years later he was back in Washington, having been selected to replace Gen. Michael J. Dugan as chief of staff of the United States Air Force on October 30, 1990.

General McPeak took over as chief during the Operation Desert Shield force buildup in Saudi Arabia and the Persian Gulf that preceded the Operation Desert Storm offensive against Iraqi dictator Saddam Hussein. As the Gulf War drew to a successful close, McPeak surmised that not only did the coalition have a technological advantage, but also the winning forces were better organized than were Saddam Hussein's forces: "We had better people and a better organization."

Because of the severe drawdown inspired by the end of the Cold War, McPeak oversaw the dismantling of several stalwart Air Force commands, including the Strategic Air Command and Systems Command. Those long-standing commands were consolidated into new commands, the Air Combat Command and Air Force Materiel Command. Aware of the support for downsizing both in Congress and in the administration of President Bill Clinton, McPeak set out to rebuild the Air Force from top to bottom and, in so doing, changed it in fundamental ways. He spoke often of how international events and domestic pressures would reshape the military services: "The Air Force must adapt or go the way of the dinosaurs."

It was his desire to make operations the centerpiece of the Air Force's organization, so he sought to strengthen its role. He introduced a different wing-level organizational concept, the

composite wing. Although not entirely new, the composite wing idea included two or more aircraft types essential to the wing's mission.

More than any chief before him, McPeak was determined to preserve the heritage of the Air Force. During organization downsizing, he introduced a systematic method for retaining historic units on the active list. In the area of training he made an effort to reduce the number of specialties so that people were more broadly trained and thus more flexibly usable. He believed that as the Air Force grew smaller, its training standards ought to be raised. Indeed, raising training standards became his creed in his purposeful pursuit of the quality Air Force. McPeak also stressed equipage. Rather than focusing on the types of equipment the Air Force ought to possess, he focused on a long-range plan for modernization. Finally, he stressed readiness, and he surmised that there the Air Force was in fairly good shape.

During his tenure, McPeak wore an unprecedented "two hats" for a short time: while chief, he acted as air secretary for three weeks. When he retired in October 1994 he felt fortunate to have worked on the "virtual Air Force—an imaginary Air Force." And he was quick to add that he could do this because he had great commanders, "great Air Force people." Following his Air Force career, McPeak became a business executive and consultant to various aerospace firms.

Gen. Ronald R. Fogleman

October 26, 1994–September 1, 1997

Gen. Ronald R. Fogleman

October 26, 1994–September 1, 1997



Portrait by George Pollard



RONALD R. FOGLEMAN was born on January 27, 1942, in Lewistown, Pennsylvania, and graduated from Juniata Joint High School, Mifflintown, Pennsylvania, in 1959. Four years later he graduated with a bachelor of science degree from the U.S. Air Force Academy and a commission as a second lieutenant. He completed pilot training in September 1964 at Vance Air Force Base, Oklahoma, and stayed on for three more years as a flight training instructor and examiner. After a six-month stint in combat crew training in F-100s at Luke Air Force Base, Arizona, he joined the 510th Tactical Fighter Squadron in June 1968 as a fighter pilot stationed at Bien Hoa Air Base, South Vietnam. On September 12, Captain Fogleman was shot down by multiple hits from small arms fire. He ejected over hostile territory and hid on the ground from an enemy that was as close as twenty yards. He was picked up by a Cobra helicopter and rode on the outside until reaching the safety of a Special Forces camp. The next day he went out again on one of the 240 combat missions he flew while stationed in Vietnam.

He returned stateside in March 1969 to attend Duke University, where he earned a master of arts degree in military and political science in 1970. He next went to the Air Force Academy in Colorado Springs, Colorado, as an associate professor of history. He then shipped to Thailand, where he served as an F-4 pilot, instructor pilot, and commander of the Laredo forward air controller flight, completing an additional seventy-five combat missions. In August 1974 he was reassigned to the Air Reserve Personnel Center in Colorado as chief of rated assignments.

After completing Army War College in 1976, Lieutenant Colonel Fogleman was assigned to the 36th Tactical Fighter Wing at Bitburg Air Base, West Germany, as assistant deputy commander for operations. During that stint, his unit became the first operational F-15 aircraft wing stationed outside the continental United States. In February 1978 he took on the duties of deputy commander for operations for the 32d Tactical Fighter Squadron at Camp New Amsterdam, Holland. While at those European posts, Fogleman maintained mission-ready status with an additional duty as the United States Air Forces in Europe F-15 aircraft demonstration pilot, performing at many international air shows.

His next assignment was as chief, tactical forces division, directorate of programs, Headquarters U.S. Air Force, Washington, D.C., where he remained until he was transferred to Hill

Air Force Base, Utah, as vice commander, 388th Tactical Fighter Wing. Then Colonel Fogleman served as director of fighter operations at Headquarters Tactical Air Command, Langley Air Force Base. In March 1983 he took command of the 56th Tactical Training Wing at MacDill Air Force Base in Florida. In August 1984 he became commander of the 836th Air Division at Davis-Monthan Air Force Base, Arizona.

Fogleman was promoted to brigadier general in October 1985, and five months later he went to the Pentagon as deputy director of programs and evaluation, Office of the Deputy Chief of Staff, Programs and Resources. Two years later he became director of that same organization, as well as chairman of the Air Staff Board, Headquarters at the Pentagon. As a lieutenant general in July 1990, he headed to the Pacific region as commander of the Seventh Air Force, deputy commander in chief, United Nations Command; deputy commander, U.S. Forces Korea; and commander, Republic of Korea, U.S. Air Component Command, Combined Forces Command, Osan Air Base, Korea. In August 1992 he became commander in chief of U.S. Transportation Command and commander of Air Mobility Command at Scott Air Force Base, Illinois, where he was promoted to four-star status. Finally, he returned to the Pentagon in October 1994 as chief of staff of the United States Air Force.

During his tenure as chief of staff, General Fogleman was considered by many to be a nonsense consensus builder who would have the Air Force work more cooperatively with the other military branches. Indeed, during his first days as chief of staff, Fogleman made known his belief that “Goldwater-Nichols had fundamentally changed the American way of war.” He urged Air Force personnel to be proud of their “heritage” and “core competencies,” but to remember that they served as “a team within a team.” He demanded that the very best people in the Air Force serve on joint staffs so unified commands would “have people there who do understand air power.” During his tenure as chief, Fogleman added to the definition of global presence “to include not only . . . air, land, and sea forces, but . . . space forces and information-based capabilities.”

One of his first initiatives as chief was to restore the traditional rank insignia to the new Air Force uniform, which had been changed by his predecessor, Gen. Merrill A. McPeak. Throughout his tenure, Fogleman supported a global engagement long-range plan, and he announced and upheld a core-values campaign. He also launched an accountability campaign when writing career-ending disciplinary letters for seven officers who escaped prosecution in the April 1994 shooting down of two Army Black Hawk helicopters in Iraq. Subsequently, he fired three wing leaders after the April 1996 CT-43 crash in Croatia that killed thirty-five people, including U.S. Secretary of Commerce Ronald Brown. In September of that year he opposed a Pentagon-commissioned report that blamed the Air Force commander in Dhahran, Saudi Arabia, Brig. Gen. Terryl Schwalier, for the vulnerability of Khobar Towers to terrorist bombing.

It was the Schwalier case that some believe induced Fogleman to leave office before completing his tenure. In a closing message to his troops he acknowledged that he might be out of

“step with the times and some of the thinking of the establishment.” He added, “if I were to continue to serve as chief of staff of the Air Force and speak out, I could be seen as a divisive force and not a team player. I do not want the Air Force to suffer for my judgment and convictions. In my view this would happen if I continue as your chief.” He also had been losing key resources and the budget battle. General Fogleman apparently did not view those losses as political, but instead as losses for the Air Force he was charged with shepherding. Thus, on July 28, 1997, Fogleman announced his official retirement effective September 1.

Gen. Michael E. Ryan

November 6, 1997–the present

Gen. Michael E. Ryan

November 6, 1997–the present



MICHAEL E. RYAN was born on December 24, 1941, in San Antonio, Texas. He graduated from the Air Force Academy in 1965 with a bachelor of science degree. After finishing pilot training at Craig Air Force Base, Alabama, in October 1966, he was assigned to the 16th Tactical Fighter Squadron at Eglin Air Force Base, Florida, where he flew F-4s. In October 1967 he joined the 13th Tactical Fighter Squadron at Udorn Royal Thai Air Force Base, Thailand. He flew on 138 combat missions, including 100 over North Vietnam. In August 1968 he transferred to the 7th Tactical Fighter Squadron at Holloman Air Force Base, New Mexico, where he again flew F-4s. After completing Squadron Officer School in 1969 and graduating from the Fighter Weapons Instructor Course at Nellis Air Force Base, Nevada, in January 1971, Captain Ryan served as an exchange officer for Mirage III fighters with the 2d Operational Conversion Unit, Royal Australian Air Force.

In July 1973 he returned stateside, assigned as an F-4 pilot with the 311th Tactical Fighter Training Squadron, Luke Air Force Base, Arizona, and from September 1974 to August 1975 he was wing weapons officer with the 8th Tactical Fighter Wing, Kunsan Air Base, South Korea. After graduating with distinction from the Air Command and Staff College, Ryan earned a master's degree in business administration from Auburn University. Promoted to major in June 1976, he headed to Langley Air Force Base, Virginia, as staff officer in the Office of the Deputy Chief of Staff for Plans, Headquarters Tactical Air Command.

Newly promoted to lieutenant colonel in April 1979, Ryan assumed command of the 61st Tactical Fighter Squadron, MacDill Air Force Base, Florida, and was responsible for overseeing the unit's transition from F-4s to F-16s. He later was assistant deputy commander for operations, 56th Tactical Fighter Wing, at MacDill.

In August 1981 Colonel Ryan was assigned to Headquarters U.S. Air Force, Washington, D.C., as chief of the Checkmate Group. Located in the basement of the Pentagon, the Checkmate Group was a separate Air Force planning cell studying counterstrategies to Soviet initiatives. Ryan later was named deputy assistant director of joint and national security council matters at the Office of the Deputy Chief of Staff for Plans and Operations. After graduating from the National War College in June 1984, he became commander of the 432d Tactical Fighter Wing at Misawa Air Base, Japan, where he reestablished U.S. fighter operations after a

twelve-year absence. He became executive to the chief of staff, Headquarters U.S. Air Force, in June 1986. After receiving his first star in May 1988, he was assigned as deputy chief of staff, plans, Tactical Air Command Headquarters, until January 1990 when he became deputy chief of staff, operations.

Promoted to major general in January 1991, he returned to Washington to become vice director of strategic plans and policy at the joint staff. Two years later, Lieutenant General Ryan became assistant to the chairman, Joint Chiefs of Staff. In September 1994 he went to Europe as commander, Allied Air Forces Southern Europe (North Atlantic Treaty Organization [NATO]), Naples, Italy; and as commander, Sixteenth Air Force (U.S. Air Force in Europe [USAFE]), Aviano Air Base, Italy. In those command positions, Ryan directed the NATO air combat operations in Bosnia and Herzegovina, which directly contributed to the Dayton Peace Accords. In April 1996 he received his fourth star and became commander of USAFE and of Allied Air Forces Central Europe, Ramstein Air Base, West Germany. General Ryan served in this capacity until he became chief of staff of the United States Air Force in November 1997. With that appointment he became the first officer in U.S. history to assume his father's former post as the most senior officer of a military service.

Ryan faced a major challenge. Despite a 33 percent reduction of force structure and personnel and a loss of two-thirds of the USAF's foreign basing, the service confronted requirements of the National Command Authority to intervene in numerous overseas deployments. The resultant high operation tempo damaged the long-term sustainability of the service. To remedy the situation, Ryan implemented the aerospace Air Expeditionary Force (AEF), which was specifically designed for rapid global deployment.

The new expeditionary aerospace force that embraced the entire USAF was projected to include about ten AEFs that would be on call or deployed for up to ninety days, every fifteen months, with two AEFs on call at all times. His mid-1998 plan called for creating five thousand positions to support deployed forces and home bases by switching authorizations from specialties less likely to deploy.

Although overall readiness of the Air Force had remained steady over the previous eight years, Ryan believed that there had been a 9 percent decline in major weapon systems. He noted that the average U.S. Air Force aircraft was twenty years old in 1999, and that the older a piece of equipment was, the more difficult it was to procure parts for it. That was his rationale for pursuing force modernization with the F-22, the C-17, and the Joint Strike Fighter programs.

General Ryan believed that the United States had the greatest air force and superb people who do all "we ask them to do." He held that the concept of an expeditionary aerospace force would allow the continuance of "exceptional aerospace forces to accomplish our global mission and to better care for our folks as we do so."

APPENDIXES

James F. McGovern (Acting)	December 16, 1988–April 29, 1989
John J. Welch, Jr. (Acting)	April 29, 1989–May 21, 1989
Donald B. Rice	May 22, 1989–January 20, 1993
Michael B. Donely (Acting)	January 20, 1993–July 13, 1993
Gen. Merrill A. McPeak (Acting)	July 14, 1993–August 5, 1993
Sheila E. Widnall	August 6, 1993–October 31, 1997
F. Whitten Peters (Acting)	November 13, 1997–August 3, 1999
F. Whitten Peters	August 3, 1999–the present

CHIEFS OF STAFF

Gen. Carl A. Spaatz
Gen. Hoyt S. Vandenberg
Gen. Nathan F. Twining
Gen. Thomas D. White
Gen. Curtis E. LeMay
Gen. John P. McConnell
Gen. John D. Ryan
Gen. George S. Brown
Gen. David C. Jones
Gen. Lew Allen, Jr.
Gen. Charles A. Gabriel
Gen. Larry D. Welch
Gen. Michael J. Dugan
Gen. John M. Loh (Acting)
Gen. Merrill A. McPeak
Gen. Ronald R. Fogleman
Gen. Ralph E. Eberhart (Acting)
Gen. Michael E. Ryan

DATES OF OFFICE

September 26, 1947–April 29, 1948
April 30, 1948–June 29, 1953
June 30, 1953–June 30, 1957
July 1, 1957–June 30, 1961
June 30, 1961–January 31, 1965
February 1, 1965–July 31, 1969
August 1, 1969–July 31, 1973
August 1, 1973–June 30, 1974
July 1, 1974–June 20, 1978
July 1, 1978–June 30, 1982
July 1, 1982–June 30, 1986
July 1, 1986–June 30, 1990
July 1, 1990–September 17, 1990
September 18, 1990–October 29, 1990
October 30, 1990–October 25, 1994
October 26, 1994–September 1, 1997
September 2, 1997–October 5, 1997
October 6, 1997–the present

APPENDIX III

Chronological Listing of Presidents of the United States, Secretaries of Defense, and Chairmen of the Joint Chiefs of Staff

PRESIDENT	SECRETARY OF DEFENSE	CHAIRMAN OF THE JOINT CHIEFS OF STAFF
Harry S Truman April 12, 1945– January 20, 1953	James V. Forrestal September 17, 1947– March 27, 1949 Louis A. Johnson March 28, 1949– September 19, 1950 George C. Marshall September 21, 1950– September 12, 1951 Robert A. Lovett September 17, 1951– January 20, 1953	General of the Army Omar N. Bradley, USA August 16, 1949–
Dwight D. Eisenhower January 20, 1953– January 20, 1961	Charles E. Wilson January 28, 1953– October 8, 1957 Neil H. McElroy October 9, 1957– December 1, 1959 Thomas S. Gates, Jr. December 2, 1959– January 20, 1961	General of the Army Omar N. Bradley, USA –August 15, 1953 Adm. Arthur W. Radford, USN August 15, 1953–August 15, 1957 Gen. Nathan F. Twining, USAF August 15, 1957–September 30, 1960 Gen. Lyman L. Lemnitzer, USA October 1, 1960–
John F. Kennedy January 20, 1961– November 22, 1963	Robert S. McNamara January 21, 1961–	Gen. Lyman L. Lemnitzer, USA –September 30, 1962 Gen. Maxwell D. Taylor, USA October 1, 1962–
Lyndon B. Johnson November 22, 1963– January 20, 1969	Robert S. McNamara –February 29, 1968 Clark M. Clifford March 1, 1968– January 20, 1969	Gen. Maxwell D. Taylor, USA –July 1, 1964 Gen. Earle G. Wheeler, USA July 3, 1964–

PRESIDENT	SECRETARY OF DEFENSE	CHAIRMAN OF THE JOINT CHIEFS OF STAFF
Richard M. Nixon January 20, 1969– August 9, 1974	Melvin R. Laird January 22, 1969– January 29, 1973 Elliot L. Richardson January 30, 1973– May 24, 1973 James R. Schlesinger July 2, 1973–	Gen. Earle G. Wheeler, USA –July 2, 1970 Adm. Thomas H. Moorer, USN July 2, 1970–July 1, 1974 Gen. George S. Brown, USAF July 1, 1974–
Gerald R. Ford August 9, 1974– January 20, 1977	James R. Schlesinger –November 19, 1975 Donald H. Rumsfeld November 20, 1975– January 20, 1977	Gen. George S. Brown, USAF
Jimmy Carter January 20, 1977– January 20, 1981	Harold Brown January 21, 1977– January 20, 1981	Gen. George S. Brown, USAF –June 20, 1978 Gen. David C. Jones, USAF June 21, 1978–
Ronald W. Reagan January 20, 1981– January 20, 1989	Caspar W. Weinberger January 21, 1981– November 23, 1987 Frank C. Carlucci November 23, 1987– January 20, 1989	Gen. David C. Jones, USAF –June 18, 1982 Gen. John W. Vessey, Jr., USA June 18, 1982–September 30, 1985 Adm. William J. Crowe, Jr., USN October 1, 1985–
George H. W. Bush January 20, 1989– January 20, 1993	Richard B. Cheney March 21, 1989– January 20, 1993	Adm. William J. Crowe, Jr., USN –September 30, 1989 Gen. Colin L. Powell, USA October 1, 1989–
William J. Clinton January 20, 1993–	Les Aspin January 20, 1993 February 3, 1994 William J. Perry February 3, 1994– January 24, 1997 William S. Cohen January 24, 1997–	Gen. Colin L. Powell, USA –September 30, 1993 Gen. John M. Shalikashvili, USA October 25, 1993–September 30, 1997 Gen. Henry H. Shelton, USA October 1, 1997–

APPENDIX IV

Promotions, Assignments, and Decorations of the Air Force Chiefs of Staff

CARL SPAATZ

Promotions	Effective Dates	
	<i>Temporary</i>	<i>Permanent</i>
Second Lieutenant		June 12, 1914
First Lieutenant		July 1, 1916
Captain		May 15, 1917
Major		July 1, 1920
Captain (postwar reduction)		December 18, 1922
Major		February 1, 1923
Lieutenant Colonel		September 18, 1923
Colonel	November 7, 1939	October 10, 1942
Brigadier General	October 2, 1940	May 31, 1944
Major General	February 6, 1942 (AUS)	June 22, 1946
Lieutenant General	March 13, 1943	
General	March 29, 1945	
General United States Air Force		June 28, 1948
Principal Assignments		Dates
25th Infantry, Schofield Barracks, Hawaii		June 1914–September 1915
Signal Corps Aviation School, San Diego, California		September 1915–June 1916
1st and 3d Aero Squadrons, New Mexico; Houston, Texas		June 1916–July 1917
Instructor, Signal Corps, Fort Sam Houston, Texas		July 1917–September 1917
31st Aero Squadron, AEF France; and Commanding Officer, 3d Aviation Instruction Center, France		September 1917–December 1918
Commanding Officer, Taliaferro Field, Texas		December 1918–May 1919
Operations Officer, Air Service, Western Department, San Francisco, California		May 1919–June 1920
VIII Corps Area, Fort Sam Houston, Texas; and later Commanding Officer, 1st (Pursuit), Kelly Field, Texas; Commanding Officer, Ellington Field, Texas		June 1920–June 1922
Post Commander, Selfridge Field, Michigan		June 1922–September 1924

Student Officer, Air Service Tactical School, Langley Field, Virginia	September 1924–June 1925
Administrative and executive duties in connection with training and operations of the Air Corps, Washington, D.C.	June 1925–June 1928
Executive, Training, and Operations Division, Office of the Chief of the Air Corps, Washington, D.C.	June 1928–April 1929
Commanding Officer, 7th Bombardment Group, Air Corps; Post Operations Officer, Summary Court Officer, and Investigating Officer for all cases of desertion, Rockwell Field, Coronado, California	April 1929–June 1930
Commanding Officer, Rockwell Air Depot; and later 7th Bombardment Group, Air Corps, Rockwell Field, Coronado, California	June 1930–June 1931
Group Commander, Rockwell Field, Coronado, California	June 1931–October 1931
Post Commander, March Field, California; and Commanding Officer, 1st Bombardment Wing, Air Corps	October 1931–June 1933
Chief, Training and Operations Division (detached service, Headquarters Army Air Corps Military Operations); Office, Chief of the Air Corps, Washington, D.C.	June 1933–August 1935
Student, Command and General Staff School, Fort Leavenworth, Kansas	August 1935–June 1936
Executive and Inspector, 2d Wing General Headquarters Air Force, Langley Field, Virginia	June 1936–March 1937
Executive, 2d Wing; and later Military Pilot, Langley Field, Virginia (detached service, Assistant Executive, Office of the Chief of the Air Corps, Washington D.C., November 1938–January 1939)	March 1937–January 1939
Chief, Plans Section, Executive Division; and later Assistant Chief of the Air Corps and Chief, Plans Division Office, Chief of the Air Corps, Washington, D.C.	January 1939–January 1942
Commanding General, Air Force Combat Command, Bolling Field, Headquarters Army Air Forces, Washington, D.C.	January 1942–May 1942
Commanding General, Eighth Air Force	May 1942–December 1942
Commanding General, Northwest African Air Forces (with additional duty, Commanding General, Twelfth Air Force); and later Commanding General, United States Army Air Forces, North African Theater of Operation	December 1942–December 1943
Commanding General, United States Strategic Air Forces in Europe and Pacific Ocean Area	December 1943–October 1945
Commanding General, Army Air Forces; and Chief of Staff of the United States Air Force, Washington, D.C.	February 1946–April 1948

Principal Decorations

Distinguished Service Cross, WWI

Distinguished Service Medal and three Oak Leaf Clusters

Distinguished Flying Cross

Legion of Merit

Air Medal

Asiatic–Pacific Campaign Medal with one Bronze Service Star

European–African–Middle Eastern Campaign Medal with six Bronze Service Stars

HOYT S. VANDENBERG

Promotions**Effective Dates***Temporary**Permanent*

Second Lieutenant

June 12, 1923

First Lieutenant

August 19, 1928

Captain

August 1, 1935

Major

March 11, 1940

July 1, 1940

Lieutenant Colonel

November 15, 1941

June 12, 1946

Colonel

January 27, 1942

Brigadier General

December 3, 1942

June 22, 1946

Major General

March 13, 1944

August 1, 1947

(w/dor December 3, 1942)

Lieutenant General

March 17, 1945

General

October 1, 1947

Principal Assignments**Dates**

Transportation Officer, 3d Attack Group, Kelly Field, Texas

October 1924–December 1924

Transportation and Supply Officer, 3d Attack Group, Kelly Field,
Texas

January 1925–December 1925

Commanding Officer, 90th Attack Squadron

January 1926–December 1926

Instructor at the Primary Flying School, March Field, California

January 1927–November 1929

Commanding Officer, 6th Pursuit Squadron, Schofield Barracks,
Hawaii

November 1929–May 1931

Assistant Stage Commander, Randolph Field, Texas

March 1931–August 1934

Student, Air Corps Tactical School, Maxwell Field, Alabama

August 1934–June 1935

Student, Command and General Staff School at Ft. Leavenworth,
Kansas

August 1935–June 1936

Instructor, Air Corps Tactical School, Maxwell Field, Alabama

July 1936–August 1938

Student at the Army War College, Washington, D.C.

September 1938–June 1939

Assistant to the Chief, Air War Plans Division Office, Chief of the
Air Corps

July 1939–June 1941

Assistant Chief of the Air Staff, for A-3, Headquarters Army
Air Forces

July 1941–August 1942

Assigned to Plans Secretary, Headquarters European Theater of
Operations, USA, England (planning North African invasion and
organizing Twelfth Air Force)

August 1942–September 1943

Chief of Staff of the Twelfth Air Force, England and North Africa	September 1942–February 1943
Chief of Staff, North African Strategic Air Force	February 1943–August 1943
Deputy Chief of the Air Staff, Headquarters Army Air Forces	August 1943–March 1944
Senior Army Air Forces Member of the U.S. Air Mission to the USSR	September 1943–January 1944
Deputy Commander in Chief, Allied Expeditionary Air Force	March 1944–August 1944
Commanding General, Ninth Air Force	August 1944–May 1945
Assistant Chief of the Air Staff, Operations, Commitments, and Requirements, Headquarters Army Air Forces	June 1945–January 1946
Assistant Chief of Staff, G-2, Central Intelligence Group, War Department General Staff; and Army Member of Joint Intelligence Committee and Combined Intelligence Committee, Office of the Joint Chiefs of Staff	January 1946–May 1946
Director of the Central Intelligence Agency, Office of the Secretary of War	May 1946–May 1947
Acting Deputy Commander and Deputy Chief of the Air Staff, Headquarters Army Air Forces	June 1947–August 1947
Deputy Commander and Chief of the Air Staff, Headquarters Army Air Forces	September 1947–September 1947
Vice Chief of Staff, Headquarters United States Air Force, Washington, D.C.	October 1947–April 1948
Chief of Staff, United States Air Force, Washington, D.C. Reappointed for fourteen-month term	April 1948–April 1952 April 1952–June 1953

Principal Decorations

Distinguished Service Medal with two Oak Leaf Clusters
 Legion of Merit
 Silver Star
 Distinguished Flying Cross
 Bronze Star
 Air Medal with three Oak Leaf Clusters
 From Great Britain: Knight Companion, British Order of the Bath
 From France: Legion of Honor, Croix de Guerre with Palm

NATHAN FARRAGUT TWINING

Promotions	Effective Dates	
	<i>Temporary</i>	<i>Permanent</i>
Second Lieutenant	November 1, 1918	
First Lieutenant	January 1, 1920	November 20, 1923
Captain	April 20, 1935	September 1, 1935
Major	October 7, 1938	July 1, 1940
Lieutenant Colonel	July 22, 1941	November 12, 1942

Colonel	February 1, 1942
Brigadier General	June 17, 1942
Major General	February 5, 1943
Lieutenant General	June 5, 1945
General	October 10, 1950

July 10, 1946
February 19, 1948

Principal Assignments

Duty, United States Military Academy, West Point, New York
 Tour of Observation, France, Belgium, Italy, and Germany
 Student, Basic Course, Infantry School; then Commanding Officer, “C” and “B” Companies, 29th Infantry, Camp Benning, Georgia
 Aide-de-camp to Brig. Gen. B. A. Poore, Camp Travis, Texas; Fort Logan, Colorado; and later Fort Sam Houston, Texas
 Student, Air Service Primary and later Advanced Flying, Brooks and Kelly Fields, Texas
 Instructor, Air Corps Primary Flying School, Brooks Field, Texas; and later March Field, California
 Adjutant and Commanding Officer, 18th Pursuit Group; and later Commanding Officer, 26th Attack Squadron, Schofield Barracks, Hawaii
 Pilot and Operations Officer, 8th Attack Squadron; then Pilot and Commanding Officer, 90th Attack Squadron; then Pilot and Mess Officer, 60th Services Squadron, Fort Crockett, Texas
 Engineering Officer, Central Zone, Chicago, Illinois (Air Mail)
 Post and Group Adjutant and later Commanding Officer, 3d Attack Group, 3d Attack Wing, Headquarters Detachment; then Assistant Operations Officer, 3d Wing, Barksdale Field, Louisiana
 Student, Air Corps Tactical School, Maxwell Field, Alabama; Student, Command and General Staff School, Fort Leavenworth, Kansas
 Air Corps Technical Supervisor, San Antonio Air Depot, Duncan Field, Texas
 Assistant Chief and later Chief, Technical Inspection Section, Office of the Chief of the Air Corps; then Assistant Executive Officer, Chief of Staff of the Army Air Force, Washington, D.C.
 Chief of Staff, U.S. Air Forces; then Commanding General, Thirteenth Air Force, South Pacific
 Commanding General, Fifteenth Air Force, Mediterranean Theater
 Temporary Duty with Headquarters Army Air Force (Liaison and Planning, Headquarters U.S. Army Strategic Air Force), Washington, D.C.
 Commanding General, Twentieth Air Force in the Pacific
 Commanding General, Air Materiel Command, Wright Field, Ohio

Dates

November 1918–July 1919
 August 1919–September 1919
 September 1919–February 1922
 March 1922–August 1923
 September 1923–September 1924
 October 1924–February 1930
 March 1930–August 1932
 September 1932–February 1934
 March 1934–June 1934
 July 1934–February 1935
 March 1935–June 1937
 July 1937–July 1940
 August 1940–July 1942
 August 1942–December 1943
 January 1944–May 1945
 June 1945–July 1945
 August 1945–December 1945
 January 1946–October 1947

Commander in Chief, Alaskan Command	October 1947–July 1950
Acting Deputy Chief of Staff (Personnel); then Vice Chief of Staff; then temporarily assumed duties of Chief of Staff; then resumed duties as Vice Chief of Staff, United States Air Force, Washington, D.C.	August 1950–June 1953
Chief of Staff, United States Air Force, Washington, D.C.	June 1953–June 1957
Chairman of the Joint Chiefs of Staff, Washington, D.C.	August 1957–September 1960

Principal Decorations

Army Distinguished Service Medal with Oak Leaf Cluster
 Navy Distinguished Service Medal
 Legion of Merit with Oak Leaf Cluster
 Distinguished Flying Cross
 Bronze Star
 Air Medal with Oak Leaf Cluster
 Commendation Ribbon
 From France: Legion of Honor–Degree of Commander, Croix de Guerre with two Palms
 From Great Britain: Knight of the British Empire

THOMAS DRESSER WHITE

Promotions	Effective Dates	
	<i>Temporary</i>	<i>Permanent</i>
Second Lieutenant	July 2, 1920	
First Lieutenant	July 2, 1920	August 24, 1925
Captain	August 23, 1935	
Major	May 20, 1939	July 2, 1943
Lieutenant Colonel	July 22, 1941	December 11, 1941
Colonel	July 4, 1942	
Brigadier General	November 9, 1942	
Major General	July 18, 1946	February 19, 1948
Lieutenant General	July 28, 1951	
General	June 30, 1953	

Principal Assignments

Dates

Cadet, United States Military Academy, West Point, New York	June 1918–July 1920
Student, Infantry School, Camp Benning, Georgia	September 1920–June 1921
Served in various capacities with the 14th Infantry at Fort Davis, Gatun, and other stations in the Canal Zone	September 1921–August 1924
Student Officer at the Air Service Primary Flying School, and the Air Service Advanced Flying School at Kelly Field, Texas	August 1924–September 1925

Assigned to Bolling Field, Washington, D.C., in various capacities including Engineering Officer and Supply Officer, 99th Observation Squadron	September 1925–May 1927
Student, Chinese language, Peiping (later Peking, Beijing), China	August 1927–May 1931
Assistant Chief, Section II, Plans Division, Office of the Chief of the Air Corps, Washington, D.C.	June 1931–June 1932
Assistant Operations Officer; Air Corps Detachment Mess Officer; Police and Prison Officer; and later Commanding Officer, Air Corps Detachment, Bolling Field, Washington, D.C.	June 1932–January 1934
Assistant Attaché and Assistant Military Attaché for Air, American Embassy, Moscow, USSR	February 1934–March 1935
Assistant Military Attaché and Assistant Military Attaché for Air; Finance Officer; and later Supply Officer, American Embassy, Rome, Italy	April 1935–May 1937
Student, Air Corps Tactical School, Maxwell Field, Alabama	June 1937–August 1938
Student, Command and General Staff School, Fort Leavenworth, Kansas	September 1938–June 1939
Chief, Intelligence Section, Information Division, Office of the Chief of the Air Corps, War Department, Washington, D.C.	June 1939–June 1940
In charge of and later Chief, Aviation Section, United States Military Mission to Brazil, Rio de Janeiro, Brazil	July 1940–March 1942
Assistant and later Chief of Staff, Third Air Force, Tampa, Florida	April 1942–December 1943
Assistant Chief of Staff, Intelligence, Headquarters Army Air Forces, Washington, D.C.	January 1944–June 1944
Deputy Commander, Thirteenth Air Force, Southwest Pacific Area	July 1944–June 1945
Commanding General, Seventh Air Force; and later Chief of Staff, Pacific Air Command, Pacific Area	July 1945–December 1946
Chief of Staff, Far East Air Forces	January 1947–January 1948
Commanding General, Fifth Air Force, Far East Command	January 1948–September 1948
Director of Legislation and Liaison, Office of the Secretary of the Air Force, Washington, D.C.	October 1948–April 1950
Air Force Member, Joint Strategic Survey Committee, Central Control Group, Office of the Joint Chiefs of Staff, Washington, D.C.	April 1950–November 1950
Special Assistant to Deputy Chief of Staff, Operations, Headquarters and Headquarters Squadron, USAF, Washington, D.C.	November 1950–February 1951
Director of Plans, Office of the Deputy Chief of Staff, Operations, Headquarters and Headquarters Squadron USAF, Washington, D.C.	February 1951–July 1951
Acting and later Deputy Chief of Staff, Operations, Headquarters USAF, Washington, D.C.	July 1951–June 1953
Vice Chief of Staff, United States Air Force, Washington, D.C.	June 1953–June 1957
Chief of Staff, United States Air Force, Washington, D.C.	July 1957–June 1961

Principal Decorations

Distinguished Service Medal
Legion of Merit with Oak Leaf Cluster
Air Medal with Oak Leaf Cluster
World War I Victory Medal
Asiatic–Pacific Campaign Medal with six Bronze Stars
From Great Britain: Commander of the Order of the British Empire

CURTIS EMERSON LEMAY

Promotions

Effective Dates

	<i>Temporary</i>	<i>Permanent</i>
Second Lieutenant (Air Reserve)	October 12, 1929	
Second Lieutenant (Air Corps)	January 6, 1930	
First Lieutenant	June 1, 1935	March 12, 1935
Captain	January 6, 1940	
Major	March 21, 1941	
Lieutenant Colonel	February 1, 1942	January 5, 1942
Colonel	September 13, 1943	March 1, 1942
Brigadier General	September 28, 1943	May 2, 1946
Major General	March 2, 1944	March 19, 1948
Lieutenant General	October 1, 1947	
General	October 29, 1951	

Principal Assignments

Dates

Plans and Operations Officer, 1st Pursuit Group, Selfridge Field, Michigan	October 1929–September 1934
Operations and Communications Officer, 18th Pursuit Group, Wheeler Field, Hawaii	September 1934–December 1936
Operations Officer, 49th Bomb Squadron, Langley Field, Virginia	January 1937–January 1941
Squadron Officer, 7th Bomb Squadron, Langley Field, Virginia	January 1941–June 1941
Pilot and Operations Officer, Ferry Command, North Atlantic, Washington, D.C.	June 1941–October 1941
Group Operations Officer, 34th Bomb Group, Westover Field, Massachusetts	October 1941–April 1942
Group Executive Officer, 306th Bomb Group, Wendover Field, Utah	April 1942–June 1942
Group Executive Officer, 306th Bomb Group, Edwards Field, Muroc, California (then to England)	July 1942–May 1943
Commanding Officer, 4th Bomb Wing, England	July 1943–September 1943
Commanding General, 3d Bomb Division, England	September 1943–June 1944
Commanding General, 20th Bomber Command, India	August 1944–January 1945

Commanding General, 21st Bomber Command, Harmon Field, Guam, and the Marianas	January 1945–July 1945
Commanding General, Twentieth Air Force, Harmon Field, Guam, and the Marianas	July 1945–August 1945
Chief of Staff, Strategic Air Forces, Pacific, Harmon Field, Guam, and the Marianas	August 1945–November 1945
Deputy Chief of the Air Staff for Research and Development, Headquarters Army Air Forces	December 1945–October 1947
Commander in Chief, Headquarters United States Air Forces in Europe, Germany	October 1947–October 1948
Commander in Chief, Strategic Air Command, Offutt Air Force Base, Nebraska	October 1948–June 1957
Vice Chief of Staff, United States Air Force, Washington, D.C.	July 1957–June 1961
Chief of Staff, United States Air Force, Washington, D.C.	July 1961–January 1965

Principal Decorations

Distinguished Service Cross
 Distinguished Service Medal with two Oak Leaf Clusters
 Silver Star
 Distinguished Flying Cross with two Oak Leaf Clusters
 Air Medal with three Oak Leaf Clusters
 Distinguished Unit Citation with Oak Leaf Cluster
 American Defense Service Medal
 American Campaign Medal
 European–African–Middle Eastern Campaign Medal with three Service Stars
 Asiatic–Pacific Campaign Medal with four Service Stars
 World War II Victory Medal
 Army of Occupation Medal with the Berlin Airlift Emblem
 From Belgium: Croix de Guerre with Palm
 From France: Legion of Honor–Degree of Commander, Croix de Guerre with Palm
 From Great Britain: Distinguished Flying Cross
 From Sweden: Commander of the Grand Cross of the Royal Order of the Sword
 From USSR: Order of Patriotic War–1st Degree

JOHN PAUL MCCONNELL

Promotions

Effective Dates

	<i>Temporary</i>	<i>Permanent</i>
Second Lieutenant	June 10, 1932	June 10, 1932
First Lieutenant	April 20, 1935	August 1, 1935
Captain	September 9, 1940	June 10, 1942

Major	July 15, 1941	
Lieutenant Colonel	January 23, 1942	
Colonel	December 22, 1942	April 2, 1948
Brigadier General	August 24, 1944	April 7, 1954
Major General	December 22, 1950	March 10, 1958
Lieutenant General	June 30, 1959	
General	October 1, 1962	

Principal Assignments

Cadet, United States Military Academy, West Point, New York
 Flying Schools, Randolph and Kelly Fields, Texas
 79th Pursuit Squadron, Barksdale Field, Louisiana
 50th Observation Squadron, Luke Field, Hawaii; and Post and
 Group Adjutant, Fifth Bomb Group, Hickam Field, Hawaii
 Assistant Engineering Officer, 91st School Squadron; and then
 Assistant Post Adjutant, Maxwell Field, Alabama
 Adjutant, Southeast Air Corps Training Center; and Aide to
 Brig. Gen. W. R. Weaver
 Assistant Executive to Acting Chief, Office of the Chief of the
 Army Air Forces, Washington, D.C.
 Deputy Chief of Staff and Chief of Staff, Headquarters Army Air
 Forces Command (Technical Training), Knollwood Field,
 North Carolina
 Deputy Chief of Staff, Headquarters Army Air Forces Training
 Command, Fort Worth, Texas
 Chief of Staff, China–Burma–India Air Force Training Command
 (Provisional), Karachi, India
 Senior Air Staff Officer and Deputy Commander, 3d Tactical Air
 Force, Comilla, India
 Senior Air Staff Officer, Southeast Asia Air Command, Kandy,
 Ceylon
 Acting Deputy Chief of Staff of Operations, Plans and Intelligence,
 Eastern Air Command, Chungking, China
 Commander, Air Division, Nanking Headquarters, Command and
 Senior Adviser to Chinese Government
 Chief, Reserve and National Guard Division, Headquarters Army
 Air Forces, Washington, D.C.
 Chief, Civilian Components Group, Headquarters United States
 Air Force, Washington, D.C.
 Deputy Special Assistant to Chief of Staff for Reserve Forces,
 Headquarters United States Air Force, Washington, D.C.
 Deputy Commander and Chief of Staff, Headquarters Third Air
 Division and Third Air Force, England (United States Air Forces
 Europe)

Dates

September 1928–June 1932
 July 1932–October 1933
 November 1933–June 1937
 June 1937–June 1939

 June 1939–July 1940

 July 1940–January 1942

 January 1942–May 1942

 May 1942–September 1943

 September 1943–November 1943

 November 1943–February 1944

 February 1944–September 1944

 September 1944–June 1945

 June 1945–April 1946

 April 1946–June 1947

 June 1947–May 1948

 May 1948–December 1948

 December 1948–July 1950

 July 1950–May 1951

Commander, 7th Air Division, England (Strategic Air Command)	May 1951–February 1952
Commander, Third Air Force and 7th Air Division, England (United States Air Forces Europe and Strategic Air Command)	February 1952–May 1952
Commander, 7th Air Division, England (Strategic Air Command)	May 1952–March 1953
Deputy Director and Director of Plans, Headquarters Strategic Air Command, Offutt Air Force Base, Nebraska	April 1953–November 1957
Commander, Second Air Force, Barksdale Air Force Base, Louisiana (Strategic Air Command)	November 1957–August 1961
Vice Commander of Strategic Air Command, Offutt Air Force Base, Nebraska	August 1961–September 1962
Deputy Commander in Chief, United States European Command, Camp de Loges, France	September 1962–August 1964
Vice Chief of Staff, United States Air Force, Washington, D.C.	August 1964–January 1965
Chief of Staff, United States Air Force, Washington, D.C.	February 1965–July 1969

Principal Decorations

Distinguished Service Medal
 Legion of Merit with three Oak Leaf Clusters
 Distinguished Flying Cross
 Bronze Star
 Air Medal
 Asiatic–Pacific Campaign Medals with four Service Stars
 From Great Britain: Commander of the Order of the British Empire
 From China: Chinese Air Force Pilot's Wings
 From Republic of Vietnam: Republic of Vietnam Air Force Cross, 1st Order
 From Chile: Great Star of Military Merit
 From Thailand: Royal Thai Air Force Command Pilot Wings
 From Japan: First Class of the Order of the Rising Sun with Grand Cordon
 From Republic of Korea: Order of Service Merit, First Class
 From Brazil: Order of Aeronautical Merit, Grade of Grand Official
 From France: Legion of Honor–Degree of Commander

JOHN DALE RYAN

Promotions

Effective Dates

	<i>Temporary</i>	<i>Permanent</i>
Second Lieutenant	June 14, 1938	
First Lieutenant	October 1, 1940	
Captain	October 15, 1941	
Major	March 29, 1942	
Lieutenant Colonel	July 23, 1942	July 2, 1948
Colonel	August 27, 1944	July 23, 1952

Brigadier General	September 24, 1952	May 16, 1960
Major General	October 24, 1956	
Lieutenant General	July 1, 1961	
General	December 1, 1964	

Principal Assignments

Dates

Student, United States Military Academy, West Point, New York	September 1934–June 1938
Student, Primary and Advanced Flying Schools, Randolph and Kelly Fields, Texas	June 1938–August 1939
Flight Instructor, Advanced Flying School, Kelly Field, Texas	August 1939–January 1942
Advanced Bombing School; Commanding Officer, 1st Training Group; and later Director of Training, Midland Army Air Forces, Texas	January 1942–August 1943
Operations Officer, Headquarters, Second Air Force, Colorado Springs, Colorado	August 1943–January 1944
Commander, 2d Bombardment Group; and later Operations Officer, 5th Bombardment Wing, Fifteenth Air Force, Italy	February 1944–April 1945
Deputy Base Commander, Midland Army Air Forces, Texas	June 1945–August 1945
Assignments with Air Transport Command, Randolph Field and Fort Worth, Texas	September 1945–March 1946
Assigned to 58th Bombardment Wing as participant in Bikini Atoll atomic weapons test	April 1946–September 1946
Assistant Chief of Staff for Plans, 58th Bombardment Wing; and later Operations Officer, Eighth Air Force, Carswell Air Force Base, Texas	September 1946–July 1948
Commander, 509th Bombardment Wing, Walker Air Force Base, New Mexico	August 1948–July 1951
Commander, 97th Bombardment Wing, Biggs Air Force Base, Texas	July 1951–June 1952
Commander, 810th Air Division, Biggs Air Force Base, Texas	June 1952–August 1953
Commander, 19th Air Division, Carswell Air Force Base, Texas	September 1953–June 1956
Director of Materiel, Headquarters Strategic Air Command, Offutt Air Force Base, Nebraska	June 1956–June 1960
Commander, Sixteenth Air Force, Torrejon Air Base, Spain	June 1960–July 1961
Commander, Second Air Force, Barksdale Air Force Base, Louisiana	July 1961–August 1963
Inspector General, United States Air Force, Washington, D.C.	August 1963–July 1964
Vice Commander in Chief, Strategic Air Command, Offutt Air Force Base, Nebraska	August 1964–November 1964
Commander in Chief, Strategic Air Command, Offutt Air Force Base, Nebraska	December 1964–January 1967
Commander in Chief, Pacific Air Forces, Hickam Air Force Base, Hawaii	February 1967–July 1968
Vice Chief of Staff, United States Air Force, Washington, D.C.	August 1968–July 1969
Chief of Staff, United States Air Force, Washington, D.C.	August 1969–July 1973

Principal Decorations

Distinguished Service Medal (Air Force design) with three Oak Leaf Clusters
Distinguished Service Medal (Army design)
Silver Star with Oak Leaf Cluster
Legion of Merit
Distinguished Flying Cross with Oak Leaf Cluster
Air Medal with five Oak Leaf Clusters
Purple Heart
European–African–Middle Eastern Campaign Medal
Vietnam Service Medal
From France: Croix de Guerre with Palm
From China: Chinese Order of the Cloud and Banner, 1st Class with Grand Cordon, and 2d Class
From Republic of Korea: National Security Merit First Class
From Republic of Vietnam: Vietnamese National Order of Vietnam/Commander, Gallantry Cross with Palm
From Greece: Grand Cross, Royal Order of Phoenix
From Spain: Grand Cross of Aeronautical Merit
From Republic of the Philippines: Golden Wings of the Philippine Air Force
From Chile: Military Star of the Armed Forces, Class of Great Star for Military Merit
From France: Legion of Honor–Degree of Commander
From Brazil: Order of Aeronautical Merit–Degree of Grand Official

GEORGE SCRATCHLEY BROWN

Promotions

Effective Dates

	<i>Temporary</i>	<i>Permanent</i>
Second Lieutenant	June 11, 1941	
First Lieutenant	June 18, 1942	June 12, 1944
Captain	October 20, 1942	
Major	February 13, 1943	September 3, 1948
Lieutenant Colonel	August 27, 1943	April 12, 1951
Colonel	October 1, 1944	April 24, 1956
Brigadier General	August 1, 1959	January 30, 1962
Major General	April 1, 1963	February 27, 1964
Lieutenant General	August 1, 1966	
General	August 1, 1968	

Principal Assignments

Dates

Cadet, United States Military Academy, West Point, New York	July 1937–June 1941
Student, Primary and Advanced Flying Schools, Pine Bluff, Arkansas, and Kelly Field, Texas	June 1941–March 1942

Pilot, B-24, Transition Training, 344th Bomb Squadron, Barksdale Field, Louisiana	March 1942–April 1942
Pilot, B-24; Flight Commander; and later Commander, 329th Bomber Squadron, 93d Bombardment Group, Barksdale Field, Louisiana; Ft. Myers Army Air Base, Florida; Grenier Field, New Hampshire; England; and later Libya	April 1942–July 1943
Air Executive Officer, 93d Bombardment Group, Libya; and later England	August 1943–April 1944
Assistant Operations Officer, 2d Bomb Division, England	May 1944–May 1945
Assistant to Air Chief of Staff, Operations, Headquarters Army Air Forces Training Command, Fort Worth, Texas; and later Barksdale Field, Louisiana	May 1945–November 1946
Assistant to Air Chief of Staff, Operations; and later Assistant Deputy of Operations, Air Defense Command, Mitchel Field, New York	December 1946–May 1948
Assistant Deputy of Operations, Air Defense Command; and later Continental Air Command, Mitchel Air Force Base, New York	May 1948–June 1950
Commander, 62d Troop Carrier Group, McChord Air Force Base, Washington, D.C.	July 1950–July 1951
Commander, 56th Fighter Interceptor Wing, Air Defense Command, Selfridge Air Force Base, Michigan	July 1951–February 1952
Commander, 4798th Defense Wing, Selfridge Air Force Base, Michigan	February 1952–April 1952
Assistant Director and later Director of Operations, Fifth Air Force, Korea	May 1952–June 1953
Commander, 3525th Pilot Training Wing, Williams Air Force Base, Arizona	July 1953–July 1956
Student, National War College, Washington, D.C.	August 1956–June 1957
Executive to the Chief of Staff, Headquarters United States Air Force, Washington D.C.	July 1957–June 1959
Military Assistant to the Deputy Secretary of Defense, Washington, D.C.	June 1959–December 1959
Military Assistant to the Secretary of Defense, Washington, D.C.	December 1959–August 1963
Commander, Eastern Transport Air Force, McGuire Air Force Base, New Jersey	August 1963–September 1964
Commander, Joint Task Force-II, Sandia Base, New Mexico	September 1964–May 1966
Assistant to the Chairman of the Joint Chiefs of Staff, Washington, D.C.	August 1966–July 1968
Commander, Seventh Air Force; and Deputy Commander for Air Operations, U.S. Military Assistance Command, Vietnam	August 1968–August 1970
Commander, Air Force Systems Command, Andrews Air Force Base, Maryland	September 1970–July 1973
Chief of Staff, United States Air Force, Washington, D.C.	August 1973–June 1974
Chairman, Joint Chiefs of Staff, Washington, D.C.	July 1974–June 1978

Principal Decorations

Distinguished Service Cross
Distinguished Service Medal with Oak Leaf Cluster
Silver Star
Legion of Merit with two Oak Leaf Clusters
Distinguished Flying Cross with Oak Leaf Cluster
Bronze Star
Air Medal with three Oak Leaf Clusters
Joint Service Commendation Medal
Presidential Unit Citation
European–African–Middle Eastern Campaign Medal with eight Service Stars
Korean Service Medal with two Service Stars
Vietnam Service Medal with two Service Stars
From Great Britain: Distinguished Flying Cross
From France: Croix de Guerre with Palm
From Republic of Korea: Presidential Unit Citation

DAVID CHARLES JONES

Promotions

Effective Dates

	<i>Temporary</i>	<i>Permanent</i>
Second Lieutenant	February 6, 1943	February 6, 1943
First Lieutenant	February 28, 1944	February 6, 1946
Captain	April 11, 1946	October 25, 1948
Major	February 5, 1951	January 23, 1952
Lieutenant Colonel	June 1, 1953	July 1, 1959
Colonel	April 23, 1957	December 22, 1960
Brigadier General	December 1, 1965	February 10, 1966
Major General	November 1, 1967	January 24, 1969
Lieutenant General	August 1, 1969	
General	September 1, 1971	

Principal Assignments

Dates

Aviation Cadet, Roswell, New Mexico	April 1942–February 1943
Advanced Flying Instructor, Roswell, New Mexico; Yuma, Arizona; Pecos, Texas; and Hobbs, New Mexico	February 1943–August 1945
Pilot; Operations and Training Officer; and Commander, 3d Emergency Rescue Squadron, Fifth Air Force, Japan	August 1945–May 1948
Unit Instructor, 2235th Air Force Rescue Training Center, Godman Field, Kentucky	May 1948–January 1949
Student, Air Tactical School, Tyndall Air Force Base, Florida	January 1949–April 1949

Student, Atomic Energy Course, Keesler Air Force Base, Mississippi	April 1949–August 1949
Assistant Operations and Training Officer, Godman Field, Kentucky	August 1949–October 1949
Student, Special Weapons Course, Sandia Base, New Mexico	October 1949–January 1950
Pilot and Operations Officer; Commander, 19th Bombardment Squadron, March Air Force Base, California	January 1950–May 1953
Commander, 22d Refueling Squadron, March Air Force Base, California	May 1953–June 1954
Commander, 33d Bombardment Squadron, March Air Force Base, California	June 1954–September 1954
Operations Planner, Bomber Mission Branch, Headquarters Strategic Air Command, Offutt Air Force Base, Nebraska	September 1954–December 1954
Aide to the Commander in Chief, Strategic Air Command, Offutt Air Force Base, Nebraska	January 1955–July 1957
Director of Materiel; Deputy Commander for Maintenance, 93d Bombardment Wing, Castle Air Force Base, California	July 1957–July 1959
Student, National War College, Washington, D.C.	August 1959–June 1960
Chief, Manned Systems Branch; Deputy Chief, then Chief, Strategic Division; Deputy Chief of Staff Operations, Headquarters United States Air Force, Washington, D.C.	July 1960–July 1964
Student, USAF Operations Training Courses, Luke and Davis-Monthan Air Force Bases, Arizona	August 1964–February 1965
Commander, 33d Tactical Fighter Wing, Eglin Air Force Base, Florida	March 1965–October 1965
Inspector General, Chief of Staff and Deputy Chief of Staff, Plans and Operations, Headquarters U.S. Air Forces Europe, Wiesbaden Air Base, West Germany	October 1965–January 1969
Deputy Chief of Staff, Operations, Headquarters Seventh Air Force; and Vice Commander, Seventh Air Force, Tan Son Nhut Air Base, Republic of Vietnam	February 1969–July 1969
Commander, Second Air Force, Barksdale Air Force Base, Louisiana	August 1969–April 1971
Vice Commander in Chief, U.S. Air Forces Europe, Wiesbaden Air Base, West Germany	April 1971–August 1971
Commander in Chief, U.S. Air Forces Europe, Wiesbaden Air Base, West Germany (Ramstein Air Base, West Germany, after March 1973); and Commander, Fourth Allied Tactical Air Force, Ramstein Air Base, West Germany	September 1971–June 1974
Chief of Staff, United States Air Force, Washington, D.C.	July 1974–June 1978
Chairman, Joint Chiefs of Staff, Washington, D.C.	June 1978–June 1982

Principal Decorations

Defense Distinguished Service Medal with Oak Leaf Cluster
 Distinguished Service Medal (Air Force) with Oak Leaf Cluster
 Legion of Merit
 Distinguished Flying Cross

Bronze Star
 Air Medal with Oak Leaf Cluster
 Air Force Outstanding Unit Award
 American Campaign Medal
 Asiatic–Pacific Campaign Medal
 World War II Victory Medal
 Army of Occupation Medal (Japan)
 National Defense Service Medal with one Bronze Service Star
 Korean Service Medal with two Bronze Service Stars
 Vietnam Service Medal with three Bronze Service Stars
 Air Force Longevity Service Award Ribbon with eight Oak Leaf Clusters
 From Republic of Vietnam: National Order, 5th Class; Air Force Distinguished Service Order, 1st Class
 From Federal Republic of Germany: Grand Cross, 2d Class of the Order of Merit
 From Republic of Korea: National Order of Security Merit (Tongil)
 From France: Legion of Honor–Degree of Commander
 From Venezuela: Air Force Cross, 1st Class, Legion of Merit Inter-American Aerial Brotherhood–
 Degree of Officer
 From Italy: Knight of the Grand Cross
 From Japan: First Class Order of the Rising Sun

LEW ALLEN, JR.

Promotions

Effective Dates

Temporary

Permanent

Second Lieutenant	June 4, 1946	
First Lieutenant	December 24, 1947	June 4, 1949
Captain	September 9, 1951	June 4, 1953
Major	April 17, 1957	June 4, 1960
Lieutenant Colonel	July 15, 1962	June 4, 1967
Colonel	September 1, 1965	August 1, 1969
Brigadier General	November 1, 1969	February 26, 1971
Major General	May 1, 1972	April 2, 1973
Lieutenant General	August 15, 1973	
General	August 1, 1977	

Principal Assignments

Dates

Cadet, United States Military Academy, West Point, New York	July 1943–June 1946
Student, Officer and Advanced Pilot Training, 2518th Army Air Forces Base Unit, Enid, Oklahoma	June 1946–November 1946
Pilot; Squadron Operations Officer; and Special Weapons Officer, 26th Bombardment Squadron and 7th Bombardment Wing, Carswell Air Force Base, Texas	November 1946–August 1950

Student, University of Illinois, Urbana	September 1950–March 1954
Physicist, Los Alamos Scientific Laboratory, New Mexico	March 1954–June 1957
Project Officer, Efficiency Division; Deputy Chief, Physics Division; Scientific Adviser and Nuclear Research Officer, Air Force Special Weapons Center, Kirtland Air Force Base, New Mexico	June 1957–December 1961
Staff Assistant and Staff Officer, Space Technology Office, Directorate of Research and Engineering, Office of the Secretary of Defense, Washington, D.C.	December 1961–June 1965
Deputy Director, Advanced Plans, Directorate of Special Projects, Office of the Secretary of the Air Force, Los Angeles, California	June 1965–June 1968
Deputy Director; and later Director, Office of Space Systems, Office of the Secretary of the Air Force, Washington, D.C.	June 1968–September 1970
Assistant to the Director of Special Projects, Office of the Secretary of the Air Force, Los Angeles, California	September 1970–April 1971
Director of Special Projects, with additional duty as Deputy Commander, Satellite Programs, Space and Missile Systems Organization, Los Angeles, California	April 1971–February 1973
Chief of Staff, Headquarters Air Force Systems Command, Andrews Air Force Base, Maryland	February 1973–March 1973
Deputy to the Director of Central Intelligence for the Intelligence Community, Washington, D.C.	March 1973–August 1973
Director, National Security Agency; and Chief, Central Security Service, Fort George G. Meade, Maryland	August 1973–August 1977
Commander, Air Force Systems Command, Andrews Air Force Base, Maryland	August 1977–March 1978
Vice Chief of Staff, United States Air Force, Washington, D.C.	April 1978–June 1978
Chief of Staff, United States Air Force, Washington, D.C.	July 1978–June 1982

Principal Decorations

Defense Distinguished Service Medal with Oak Leaf Cluster
 Distinguished Service Medal (Air Force)
 Legion of Merit with two Oak Leaf Clusters
 Joint Service Commendation Medal
 Air Force Outstanding Unit Award Ribbon
 Air Force Organizational Excellence Award Ribbon
 National Intelligence Distinguished Service Medal
 American Campaign Medal
 World War II Victory Medal
 From Republic of Korea: Order of National Security Merit
 From Greece: Knight Commanders High Cross of the Order of Phoenix
 From Brazil: Order of Aeronautical Merit
 From Morocco: Grand Ribbon of the Ouissam Alaouite
 From Spain: Grand Cross of Aeronautical Merit with White Symbol
 From Japan: Order of the Rising Sun First Class

From Portugal: Medal of Military Merit
 From Italy: Cavalier of the Grand Cross

CHARLES A. GABRIEL

Promotions	Effective Dates
Second Lieutenant	June 1950
First Lieutenant	March 26, 1952
Captain	May 14, 1954
Major	September 1, 1961
Lieutenant Colonel	September 1, 1965
Colonel	July 1, 1968
Brigadier General	November 1, 1972
Major General	September 1, 1974
Lieutenant General	August 1, 1977
General	August 1, 1980

Principal Assignments

Dates

Basic and Advanced Pilot Training, Goodfellow Air Force Base, Texas; and Craig Air Force Base, Alabama	June 1950–September 1951
F–51 and F–86 Pilot, 18th Fighter–Bomber Wing and 51st Fighter–Interceptor Wing, South Korea	September 1951–December 1952
Flight Commander; Operations Officer; and Group Gunnery Officer, 86th Fighter–Interceptor Wing, Landstuhl Air Base, Germany	January 1953–January 1956
Air Officer Commanding, Cadet Wing, U.S. Air Force Academy, Colorado Springs, Colorado	January 1956–June 1959
Group Adjutant and Commander, Headquarters Squadron Section, 3550th Pilot Training Group, Moody Air Force Base, Georgia	July 1959–July 1961
Student, Naval War College, Command and Staff Course, Newport, Rhode Island	August 1961–August 1962
Student, George Washington University, Washington, D.C.	August 1962–August 1963
Staff Officer, Directorate of Plans, Headquarters United States Air Force, Washington, D.C.	August 1963–August 1966
Student, Industrial College of the Armed Forces, Fort Lesley J. McNair, Washington, D.C.	September 1966–July 1967
Special Assistant and Executive Officer to Chief of Staff, Supreme Headquarters Allied Powers Europe, Mons, Belgium	July 1967–June 1970
Student, F–4 Flying Training, 4535th Combat Crew Training Squadron, George Air Force Base, California	July 1970–March 1971
Vice Commander; and later Commander, 432d Tactical Reconnaissance Wing, Udorn Royal Thai Air Force Base, Thailand	April 1971–July 1972

Deputy Director for Operational Forces; and Deputy Director of Operations, Office of the Deputy Chief of Staff, Plans and Operations, Headquarters United States Air Force, Washington, D.C.	July 1972–February 1975
Deputy Chief of Staff for Operations, Tactical Air Command, Langley Air Force Base, Virginia	February 1975–September 1977
Deputy Commander, U.S. Forces Korea, and Deputy Commander in Chief, United Nations Command, Seoul, South Korea	September 1977–April 1979
Deputy Chief of Staff for Operations, Plans and Readiness, Headquarters United States Air Force, Washington, D.C.	April 1979–July 1980
Commander in Chief, United States Air Forces in Europe, and Commander, Allied Air Forces Central Europe, Ramstein Air Base, West Germany	July 1980–June 1982
Chief of Staff, United States Air Force, Washington, D.C.	July 1982–July 1986

Principal Decorations

Defense Distinguished Service Medal
 Air Force Distinguished Service Medal
 Legion of Merit with Oak Leaf Cluster
 Distinguished Flying Cross with four Oak Leaf Clusters
 Air Medal with fourteen Oak Leaf Clusters
 Air Force Commendation Medal with Oak Leaf Cluster
 Presidential Unit Citation Emblem
 Air Force Outstanding Unit Award Ribbon
 World War II Victory Medal
 Army of Occupation Medal (Japan)
 National Defense Service Medal with one Service Star
 Korea Service Medal with two Service Stars
 Vietnam Service Medal with four Service Stars
 Air Force Longevity Service Award Ribbon with eight Oak Leaf Clusters
 From Federal Republic of Germany: Grand Cross, Second Class of the Order of Merit
 From Republic of Korea: Order of National Security Merit (Gugseon Medal)
 From Ecuador: Star of the Armed Forces of Ecuador, Grade of the Great Star of Military Merit
 From Colombia: Air Force Cross
 From Brazil: Order of Aeronautical Merit, Grade of Grand Officer
 From Venezuela: Air Force Cross, First Class
 From Pakistan: Medal for Distinction
 From France: Legion of Honor
 From Republic of Korea: Presidential Unit Citation
 From Republic of Vietnam: Gallantry Cross with Palm; Campaign Medal
 United Nations Service Medal

LARRY D. WELCH

Promotions**Effective Dates**

Second Lieutenant	April 29, 1955
First Lieutenant	October 29, 1956
Captain	January 1, 1960
Major	July 15, 1964
Lieutenant Colonel	November 1, 1968
Colonel	June 1, 1971
Brigadier General	July 1, 1977
Major General	September 15, 1979
Lieutenant General	July 1, 1981
General	August 1, 1984

Principal Assignments**Dates**

Enlisted in the Kansas National Guard	October 1951–August 1953
Student, Pilot Training, Williams Air Force Base, Arizona; and later Advanced Pilot Training, Craig Air Force Base, Alabama	November 1953–August 1955
Flight Instructor, Williams Air Force Base, Arizona; Laughlin Air Force Base, Texas; and Craig Air Force Base, Alabama	August 1955–July 1958
Team Member, Single-Engine Standardization and Evaluation Team, Headquarters Air Training Command	July 1958–July 1962
Chief, Combat Operations Center, 366th Tactical Fighter Wing; and later Pilot, 389th Tactical Fighter Squadron, Chaumont Air Base, France	July 1962–September 1963
Pilot; Flight Commander; and Operations Officer, 389th Tactical Fighter Squadron, Holloman Air Force Base, New Mexico	September 1963–March 1966
Operations Officer, 389th Tactical Fighter Squadron, Phan Rang Air Base, Republic of Vietnam	March 1966–October 1966
Chief, Operations and Training Division, 366th Tactical Fighter Wing, Da Nang Air Base, Republic of Vietnam	October 1966–February 1967
Student, Armed Forces Staff College, Norfolk, Virginia	February 1967–July 1967
Director, Air Superiority Studies, Fighter Division, Office of the Assistant Chief of Staff for Studies and Analysis; later Chief, Fighter Division, Office of the Assistant Chief of Staff for Studies and Analysis, Headquarters United States Air Force, Washington, D.C.	July 1967–August 1971
Student, National War College, Fort Lesley J. McNair, Washington, D.C.	August 1971–July 1972
Deputy Commander for Operations; and later Vice Commander, 35th Tactical Fighter Wing, George Air Force Base, California	July 1972–September 1974
Special Assistant to the Commander, Tactical Air Command, Langley Air Force Base, Virginia	September 1974–July 1975

Commander, First Tactical Fighter Wing, Langley Air Force Base, Virginia	August 1975–August 1977
Inspector General, Tactical Air Command, Langley Air Force Base, Virginia	August 1977–October 1977
Deputy Chief of Staff for Plans, Tactical Air Command, Langley Air Force Base, Virginia	October 1977–March 1979
Deputy Chief of Staff for Operations, Tactical Air Command, Langley Air Force Base, Virginia	March 1979–May 1981
Commander, Ninth Air Force, Shaw Air Force Base, South Carolina	June 1981–November 1982
Deputy Chief of Staff, Programs and Resources, Headquarters United States Air Force, Washington, D.C.	November 1982–July 1984
Vice Chief of Staff, United States Air Force, Washington, D.C.	July 1984–August 1985
Commander in Chief, Strategic Air Command; and Director, Joint Strategic Target Planning Staff, Offutt Air Force Base, Nebraska	August 1985–June 1986
Chief of Staff, United States Air Force, Washington, D.C.	July 1986–June 1990

Principal Decorations

Defense Distinguished Service Medal with Oak Leaf Cluster
 Distinguished Service Medal with Oak Leaf Cluster
 Legion of Merit with Oak Leaf Cluster
 Distinguished Flying Cross
 Meritorious Service Medal
 Air Medal with six Oak Leaf Clusters
 Air Force Commendation Medal with two Oak Leaf Clusters
 Joint Meritorious Unit Award
 Air Force Outstanding Unit Award with “V” Device and two Oak Leaf Clusters
 Good Conduct Medal
 National Defense Service Medal with one Service Star
 Vietnam Service Medal with two Service Stars
 Air Force Overseas Ribbon–Short with Oak Leaf Cluster
 Air Force Longevity Service Award Ribbon with seven Oak Leaf Clusters
 Small Arms Expert Marksmanship Ribbon
 From Republic of Vietnam: Gallantry Cross with Palm; Campaign Medal
 From Republic of Korea: Order of National Security (Gugseon Medal)

MICHAEL J. DUGAN

Promotions	Effective Dates
Second Lieutenant	June 4, 1958
First Lieutenant	December 4, 1959
Captain	December 4, 1962

Major	June 20, 1967
Lieutenant Colonel	August 1, 1971
Colonel	April 1, 1974
Brigadier General	July 1, 1981
Major General	August 1, 1984
Lieutenant General	July 1, 1987
General	May 1, 1989

Principal Assignments

Dates

Student, Primary Pilot Training, 3301st Pilot Training Group, Moore Air Force Base, Texas	June 1958–March 1959
Student, Basic Pilot Training, 3640th Pilot Training Wing, Laredo Air Force Base, Texas	March 1959–September 1959
Student, Advanced Flying School, F–100, 4510th Combat Crew Training Group, Luke Air Force Base, Arizona	September 1959–May 1960
Student, U.S. Air Force Operational Training Course, F–100, 4520th Combat Crew Training Group, Nellis Air Force Base, Nevada	May 1960–September 1960
F–100 Pilot, 79th Tactical Fighter Squadron, Royal Air Force Station, Woodbridge, England	September 1960–August 1964
A–1 Pilot, 603d Air Commando Squadron, 4410th Combat Crew Training Squadron, 4410th Combat Crew Training Wing, Eglin Auxiliary Field #9, Florida	August 1964–December 1966
A–1E Pilot, First Air Commando Squadron, Pleiku Air Base, Republic of Vietnam	January 1967–November 1967
Special Projects Officer and Instructor, Military Training Division, U.S. Air Force Academy, Colorado Springs, Colorado	November 1967–June 1969
Air Officer, Commanding, Cadet Squadron 17, U.S. Air Force Academy, Colorado Springs, Colorado	June 1969–June 1971
Air Officer, Commanding, Cadet Squadron 4, U.S. Air Force Academy, Colorado Springs, Colorado	June 1971–November 1972
Student, Air War College, Maxwell Air Force Base, Alabama	November 1972–June 1973
Assistant Chief, Objectives Assessment Branch, Headquarters United States Air Force, Washington, D.C.	June 1973–May 1974
Chief, Doctrine Implementation Branch, Headquarters United States Air Force, Washington, D.C.	May 1974–September 1975
Executive Officer to the Vice Chief of Staff, Headquarters United States Air Force, Washington, D.C.	September 1975–July 1977
Vice Commander, 355th Tactical Fighter Wing, Davis-Monthan Air Force Base, Arizona	July 1977–January 1979
Commander, 355th Tactical Fighter Wing, Davis-Monthan Air Force Base, Arizona	February 1979–May 1980
Commander, 23d Tactical Fighter Wing, England Air Force Base, Louisiana	May 1980–March 1981

Commander, 832d Air Division, Luke Air Force Base, Arizona	March 1981–May 1982
Assistant Deputy Chief of Staff of Operations, Headquarters Tactical Air Command, Langley Air Force Base, Virginia	May 1982–April 1983
Inspector General, Headquarters Tactical Air Command, Langley Air Force Base, Virginia	April 1983–August 1984
Deputy Chief of Staff for Operations, Headquarters Tactical Air Command, Langley Air Force Base, Virginia	September 1984–June 1986
Director of Operations; Deputy Chief of Staff, Plans and Operations, Headquarters United States Air Force, Washington, D.C.	June 1986–January 1987
Assistant Deputy Chief of Staff, Plans and Operations, Headquarters United States Air Force, Washington, D.C.	January 1987–June 1987
Deputy Chief of Staff, Programs and Resources, Headquarters United States Air Force, Washington, D.C.	July 1987–February 1988
Deputy Chief of Staff, Plans and Operations, Headquarters United States Air Force, Washington, D.C.	March 1988–April 1989
Commander and Chief, U.S. Air Forces in Europe, and Commander, Allied Air Forces, Central Europe, Ramstein Air Base, West Germany	April 1989–July 1990
Chief of Staff, United States Air Force, Washington, D.C.	July 1990–September 1990

Principal Decorations

Distinguished Service Medal
Silver Star
Legion of Merit with two Oak Leaf Clusters
Distinguished Flying Cross
Purple Heart
Air Medal
Air Force Commendation Medal with two Oak Leaf Clusters
Presidential Unit Citation
Air Force Outstanding Unit Award
Air Force Organizational Excellence Award with Oak Leaf Cluster
Combat Readiness Medal
National Defense Service Medal with one Service Star
Vietnam Service Medal with three Service Stars
Air Force Longevity Service Medal Award Ribbon with seven Oak Leaf Clusters
Small Arms Expert Marksmanship Ribbon
Air Force Training Ribbon
From Republic of Vietnam: Gallantry Cross with Palm; Campaign Medal

MERRILL A. McPEAK

Promotions**Effective Dates**

Second Lieutenant	June 19, 1957
First Lieutenant	May 30, 1959
Captain	October 1, 1962
Major	May 20, 1968
Lieutenant Colonel	November 1, 1972
Colonel	April 1, 1974
Brigadier General	July 1, 1981
Major General	October 1, 1983
Lieutenant General	May 22, 1985
General	August 1, 1988

Principal Assignments**Dates**

Student, Officer Preflight Training, Lackland Air Force Base, Texas	November 1957–January 1958
Student, Pilot Training, Hondo Air Force Base, Texas; and Vance Air Force Base, Oklahoma	January 1958–January 1959
Student, F–100 Combat Crew Training, Luke Air Force Base, Arizona; and Nellis Air Force Base, Nevada	February 1959–December 1959
F–104C Fighter Pilot, 436th Tactical Fighter Squadron, George Air Force Base, California	December 1959–August 1961
F–100D Fighter Pilot, 79th Tactical Fighter Squadron, Royal Air Force Station, Woodbridge, England	August 1961–May 1964
Fighter Staff Officer, Tactical Evaluation Division, Headquarters Third Air Force, South Ruislip Air Station, England	May 1964–August 1965
F–104G Instructor Pilot, 4443d Combat Crew Training Squadron; later, F–104G Weapons Officer, 4510th Combat Crew Training Wing, Luke Air Force Base, Arizona	September 1965–December 1966
Demonstration Pilot, U.S. Air Force Air Demonstration Squadron (“Thunderbirds”), Nellis Air Force Base, Nevada	December 1966–December 1968
F–100D Fighter Pilot, 612th Tactical Fighter Squadron, Phu Cat Air Base, Republic of Vietnam	December 1968–January 1969
Operations Officer; later Commander, Operation Commando Sabre (“Misty” Fast FACs), Phu Cat Air Base, Republic of Vietnam	January 1969–August 1969
Chief, Standardization/Evaluation Division, 31st Tactical Fighter Wing, Tuy Hoa Air Base, Republic of Vietnam	August 1969–December 1969
Student, Armed Forces Staff College, Norfolk, Virginia	January 1970–July 1970
Air Operation Staff Officer, Mideast Division, Directorate of Plans and Policy, Headquarters United States Air Force, Washington, D.C.	August 1970–August 1973
Student, National War College, Fort Lesley J. McNair, Washington, D.C.	August 1973–June 1974

Assistant Deputy Commander for Operations, 1st Tactical Fighter Wing, MacDill Air Force Base, Florida	June 1974–April 1975
Student, French language training (en route for duty as Air Attaché to Republic of Cambodia), Foreign Service Institute, Washington, D.C.	April 1975–June 1975
Military Fellow, Council on Foreign Relations, New York City	July 1975–June 1976
Commander, 513th Combat Support Group, Royal Air Force Station, Mildenhall, England	July 1976–July 1977
Vice Commander, 406th Tactical Fighter Training Wing, Zaragoza Air Base, Spain	July 1977–July 1978
Assistant Chief of Staff, Current Operations, Allied Air Forces Central Europe, Boerfink, West Germany	July 1978–February 1980
Commander, 20th Tactical Fighter Wing, Royal Air Force Station, Upper Heyford, England	February 1980–June 1981
Chief of Staff, Headquarters United States Air Forces Europe, Ramstein Air Base, West Germany	June 1981–October 1982
Deputy Chief of Staff, Plans, Headquarters Tactical Air Command, Langley Air Force Base, Virginia	October 1982–May 1985
Deputy Chief of Staff, Programs and Resources, Headquarters United States Air Force, Washington, D.C.	May 1985–June 1987
Commander, Twelfth Air Force; and Commander, U.S. Southern Command Air Forces, Bergstrom Air Force Base, Texas	June 1987–July 1988
Commander in Chief, Pacific Air Forces, Hickam Air Force Base, Hawaii	July 1988–October 1990
Chief of Staff, United States Air Force, Washington, D.C.	October 1990–October 1994

Principal Decorations

Distinguished Service Medal
 Silver Star
 Legion of Merit with Oak Leaf Cluster
 Distinguished Flying Cross with Oak Leaf Cluster
 Meritorious Service Medal
 Air Medal with thirteen Oak Leaf Clusters
 Air Force Commendation Medal with three Oak Leaf Clusters
 Air Force Outstanding Unit Award
 Combat Readiness Medal
 National Defense Service Medal
 Vietnam Service Medal with four Service Stars
 Air Force Overseas Ribbon
 Air Force Longevity Service Award Ribbon with five Oak Leaf Clusters
 Small Arms Expert Marksmanship Ribbon
 From Republic of Vietnam: Gallantry Cross with Palm, Campaign Medal

RONALD R. FOGLEMAN

Promotions**Effective Dates**

Second Lieutenant	June 5, 1963
First Lieutenant	December 5, 1964
Captain	March 10, 1967
Major	March 1, 1971
Lieutenant Colonel	May 1, 1975
Colonel	January 1, 1980
Brigadier General	October 1, 1985
Major General	February 1, 1988
Lieutenant General	July 1, 1990
General	September 1, 1992

Principal Assignments**Dates**

Pilot Training, 3576th Student Squadron, Vance Air Force Base, Oklahoma	June 1963–September 1964
T–37 Flight Training Instructor, 3575th Pilot Training Squadron, Vance Air Force Base, Oklahoma	September 1964–May 1967
Flight Examiner, 3575th Pilot Training Wing, Vance Air Force Base, Oklahoma	May 1967–December 1967
F–100 Combat Crew Training, Luke Air Force Base, Arizona	December 1967–June 1968
F–100 Fighter Pilot, 510th Tactical Fighter Squadron, Bien Hoa Air Base, South Vietnam	June 1968–December 1968
Operation Commando Sabre F–100 Forward Air Controller, 37th Tactical Fighter Wing, South Vietnam	December 1968–April 1969
F–100 Fighter Pilot, 510th Tactical Fighter Squadron, Bien Hoa Air Base, South Vietnam	April 1969–September 1969
Student of History (in preparation for assignment as U.S. Air Force Academy Instructor), Institute of Technology, Wright-Patterson Air Force Base, Ohio	September 1969–December 1970
History Instructor, U.S. Air Force Academy, Colorado Springs, Colorado	December 1970–April 1973
F–4D/E Flight Commander, 421st Tactical Fighter Squadron, Udorn Royal Thai Air Force Base, Thailand	April 1973–August 1974
Chief, Rated Officer Career Planning Section, Headquarters Air Reserve Personnel Center, Lowry Air Force Base, Colorado	August 1974–July 1975
Student Officer, U.S. Army War College, Carlisle Barracks, Pennsylvania	July 1975–August 1976
Assistant Deputy Commander of Operations; and later, Chief of the Standardization and Evaluation Division, 36th Tactical Fighter Wing, Bitburg Air Base, West Germany	August 1976–February 1978

Deputy Commander for Operations, 32d Tactical Fighter Squadron, Camp New Amsterdam, the Netherlands	March 1978–June 1979
Chief, Tactical Forces Division, Directorate of Programs, Headquarters United States Air Force, Washington, D.C.	June 1979–August 1981
Vice Commander, 388th Tactical Fighter Wing, Hill Air Force Base, Utah	August 1981–June 1982
Director of Fighter Operations, Deputy Chief of Staff, Operations, Headquarters Tactical Air Command, Langley Air Force Base, Virginia	June 1982–March 1983
Commander, 56th Tactical Training Wing, MacDill Air Force Base, Florida	March 1983–August 1984
Commander, 836th Air Division, Davis-Monthan Air Force Base, Arizona	August 1984–March 1986
Deputy Director, Programs and Evaluation, Office of the Deputy Chief of Staff, Programs and Resources; Chairman, Programs Review Committee, Headquarters United States Air Force, Washington, D.C.	March 1986–January 1988
Director, Programs and Evaluation; and Chairman, Air Staff Board, Headquarters United States Air Force, Washington, D.C.	January 1988–June 1990
Commander, Seventh Air Force; Deputy Commander in Chief, United Nations Command; Deputy Commander, U.S. Forces Korea; and Commander, Republic of Korea/U.S. Air Component Command, Combined Forces Command, Osan Air Base, Korea	July 1990–August 1992
CINCUSTRANSCOM; Commander, Air Mobility Command, Scott Air Force Base, Illinois	August 1992–October 1994
Chief of Staff, United States Air Force, Washington, D.C.	October 1994–August 1997

Principal Decorations

Defense Distinguished Service Medal with two Oak Leaf Clusters
 Air Force Distinguished Service Medal with Oak Leaf Cluster
 Army Distinguished Service Medal
 Navy Distinguished Service Medal
 Silver Star
 Legion of Merit with Oak Leaf Cluster
 Distinguished Flying Cross with Oak Leaf Cluster
 Purple Heart
 Meritorious Service Medal
 Air Medal with seventeen Oak Leaf Clusters
 Aerial Achievement Medal
 Air Force Commendation Medal with two Oak Leaf Clusters
 Vietnam Service Medal with three Service Stars
 From Republic of Korea: Order of National Security Merit, Kooksun
 From Republic of Vietnam: Gallantry Cross with Palm
 From Venezuela: Air Force Cross, First Class

From Thailand: Knight Grand Cross, First Class, of the Most Noble Order of the Crown of Thailand
 From Japan: Grand Cordon, First Class, of the Rising Sun
 From Sweden: Royal Order, First Class, of the Polar Star
 Legion of Merit, System of Cooperation Among American Air Forces
 From France: Legion of Honor, with the rank of Commander

MICHAEL E. RYAN

Promotions

Effective Dates

Second Lieutenant	June 9, 1965
First Lieutenant	December 9, 1966
Captain	June 13, 1968
Major	June 1, 1976
Lieutenant Colonel	April 1, 1979
Colonel	July 1, 1981
Brigadier General	May 1, 1988
Major General	January 1, 1991
Lieutenant General	May 10, 1993
General	April 4, 1996

Principal Assignments

Dates

Student, Undergraduate Pilot Training, 3225th Student Squadron, Air Training Command, Craig Air Force Base, Alabama	June 1965–September 1966
F–4 Pilot, 16th Tactical Fighter Squadron, Eglin Air Force Base, Florida	September 1966–October 1967
F–4 Pilot and Aircraft Commander, 13th Tactical Fighter Squadron, Udorn Royal Thai Air Force Base, Thailand	October 1967–August 1968
F–4 Aircraft Commander, 7th Tactical Fighter Squadron, Holloman Air Force Base, New Mexico	August 1968–January 1971
Exchange Officer instructing in Mirage III Fighters, 2d Operational Conversion Unit, Royal Australian Air Force Base, Williamtown, Australia	January 1971–July 1973
Instructor Pilot and Flight Commander, 311th Tactical Fighter Training Squadron, Luke Air Force Base, Arizona	July 1973–September 1974
Wing Weapons Officer, 8th Tactical Fighter Wing (F–4s), Kunsan Air Base, South Korea	September 1974–August 1975
Student, Air Command and Staff College, Maxwell Air Force Base, Alabama	August 1975–July 1976
Staff Officer, Office of the Deputy Chief of Staff for Plans, Headquarters Tactical Air Command, Langley Air Force Base, Virginia	July 1976–April 1979

Commander, 61st Tactical Fighter Squadron; then Assistant Deputy Commander for Operations (F-16s), 56th Tactical Fighter Wing, MacDill Air Force Base, Florida	April 1979–August 1981
Chief, Checkmate Group; then Deputy Assistant Director for Joint and National Security Matters, Office of the Deputy Chief of Staff for Plans and Operations, Headquarters United States Air Force, Washington, D.C.	August 1981–August 1983
Student, National War College, Fort Lesley J. McNair, Washington, D.C.	August 1983–June 1984
Commander, 432d Tactical Fighter Wing, Misawa Air Base, Japan	June 1984–June 1986
Executive to the Chief of Staff, Headquarters United States Air Force, Washington, D.C.	June 1986–June 1988
Deputy Chief of Staff, Plans; then Deputy Chief of Staff, Operations, Headquarters Tactical Air Command, Langley Air Force Base, Virginia	June 1988–July 1991
Vice Director of Strategic Plans and Policy, Joint Staff, Washington, D.C.	July 1991–May 1993
Assistant to the Chairman, Joint Chiefs of Staff, Washington, D.C.	May 1993–September 1994
Commander, Allied Air Forces Southern Europe (NATO), Naples, Italy; and Commander, Sixteenth Air Force (United States Air Forces Europe), Aviano Air Base, Italy	September 1994–April 1996
Commander, United States Air Forces Europe; and Commander, Allied Air Forces Central Europe, Ramstein Air Base, West Germany	April 1996–October 1997
Chief of Staff, United States Air Force, Washington, D.C.	October 1997–the present

Principal Decorations

Defense Distinguished Service Medal with Oak Leaf Cluster
 Distinguished Service Medal
 Legion of Merit with two Oak Leaf Clusters
 Distinguished Flying Cross
 Meritorious Service Medal with two Oak Leaf Clusters
 Air Medal with eleven Oak Leaf Clusters

APPENDIX V

Biographies of the Portrait Artists

Charles Baskerville (1896–1994) was born in Raleigh, North Carolina, and later lived in Chapel Hill, where his father was a chemistry professor at the University of North Carolina. The family moved to New York when his father established the chemistry department of the City University of New York. Baskerville graduated from Cornell University and then studied at the Art Students League in New York and at L'Academie Julien in Paris. His professional career was twice interrupted by the world wars, in which he served as an officer. As a lieutenant colonel in World War II, he served as official portrait painter for the U.S. Army Air Forces and was decorated with the Legion of Merit by Gen. Henry H. Arnold. While in the service, Colonel Baskerville painted seventy-two portraits of heroes and commanding generals. The artist once told a friend, “Of all the work I have done in my life, those portraits are what I am proudest of.” This collection, noted for its diversity of characters and depictions of men recently in combat, was exhibited by the Army to honor those who served in the Army Air Forces during World War II. After the war, Baskerville became a renowned portrait painter and muralist. Those who sat for him included Jawaharlal Nehru, Bernard Baruch, William S. Paley, the duchess of Windsor, Cornelius Vanderbilt Whitney, Mr. and Mrs. Paul Mellon, Richard Rogers, Helen Hayes, and the king of Nepal. His mural projects included a commission for the conference room of the Joint Committee on Military Affairs of the United States Senate and House of Representatives. Baskerville died on November 20, 1994, at age ninety-eight.

Francis Henry Beaugureau (1920–) was born in Chicago, Illinois, and studied at the Mizen Academy and the Art Institute of Chicago. He was a member of the American Watercolor Society and the Philadelphia Watercolor Club. His works appear as part of the U.S. Air Force art collection and at the Department of the Army, the Frye Art Museum in Seattle, and the Phoenix Art Center. In addition to those collections, Beaugureau has exhibited his work at the Corcoran Gallery of Art in Washington, D.C., the American Watercolor Society, the Arizona State Fair, and the University of Arizona.

Bruno Beran (1888–1979) had a long and distinguished career as a portrait and landscape artist. He was born before the turn of the twentieth century in Brunn, Bohemia, in what was then the Austro-Hungarian Empire. Considered a child prodigy both as a painter and a violinist, Beran was admitted to the Imperial Academy of Fine Art in Vienna at age fifteen.

He then transferred to the Royal Academy in Munich. There his work won several prizes and, at age nineteen, he began his career as an independent artist when Impressionism was in vogue. He moved to Paris to become a pupil of Claude Monet, and there he exhibited his works at the Salon des Independants and the Salon de la Société Nationale des Beaux Arts. World War I forced Beran's return to Austria, and there he founded and became president of the Society for Artists of the Sudetenland. For nearly a decade he enhanced his reputation as a portrait painter. In 1930 he moved to Barcelona, where he remained until the beginning of the Spanish Civil War in 1936, and then returned to Paris to reestablish his reputation there. To escape Nazi persecution, Beran made a hasty escape following the German invasion of France, traveling through Spain and Portugal to Montreal, Canada, and eventually to the United States, where he became an American citizen. In 1945, at age fifty-seven, he settled in New York City and concentrated increasingly on portraiture. Over the next several decades he moved between New York and Washington, D.C., painting such notables as Justice William O. Douglas; Adlai Stevenson, the U.S. ambassador to the United Nations; and Secretary of the Air Force Robert C. Seamans.

John G. Bonner (1925–) was born in Gainsville, Texas, on January 8, 1925. After receiving a bachelor of arts degree from Southern Methodist University, he studied for another three years at the Art Center College of Design in Los Angeles, California. During World War II, Bonner served as a naval sonar officer aboard a destroyer. He has lived and worked as a portrait and commercial artist in the Washington, D.C., area for more than forty years. Bonner has had many commissions and received several merit awards from the Washington Art Directors' exhibitions. Slides of his portraits are on file with the National Portrait Gallery in Washington, D.C.

Pamela Firestone Bowman graduated from York Academy of Arts in 1970 and quickly established a thriving career. Bowman has developed her portrait painting skills primarily on her own, with occasional classes at the Art Students League in New York. Her portraits are personalized and sensitive renderings of museum quality. Prior to portrait painting, Bowman restored fine frames and worked as an "impainter" restoring old master paintings. Learning the delicate discipline of "impainting" contributed to her appreciation of the Renaissance painters, and it has influenced her own careful and beautifully luminous approach to color. Her process of "underglazing" requires great skill and tremendous patience, as it requires the artist to build up the flesh tone with very thin layers of paint that need to dry before each new application. Her patience is well rewarded, however, by the rich skin tones that have the depth and look of real skin. Bowman's subjects have included Air Force Chief of Staff Gen. Merrill McPeak; James Beggs, former National Aeronautics and Space Administration administrator; Kenneth Rogers, head of the Nuclear Regulatory Commission; and Sylvia Lawry, founder of the National Multiple Sclerosis Society.

Lynn Buckham studied at the Minneapolis School of Art and the American Academy of Art in Chicago. He produced illustration design for the Charles E. Cooper Studio in New York City; the *Saturday Evening Post*; and other magazines such as *Ladies Home Journal*,

Cosmopolitan, *Good Housekeeping*, *Redbook*, and *McCalls*. He went to London and continued his illustration work until he turned to portraiture. That change of focus led him to commitments that demanded commuting from London to the United States. In 1975 Buckham returned to the United States and devoted himself solely to portraiture. His work featured such prominent figures as the Earl of Lichfield, U.S. Supreme Court Justice Harry A. Blackmun, and Justice Vincent Haneman of the New Jersey Supreme Court. Buckham's method of painting involved extensive photography of the subject, an approach that allowed for a more natural pose. His works were noted not only for his ability to capture a likeness but also for the freshness and spark of life his brush imparted.

Gardner Cox (1907–1988) spent his youth painting at the seaside art communities of Rockport and Provincetown, Massachusetts. He entered Harvard in 1924 and studied at the Art Students League and then the Museum School from 1928 to 1930 before taking architecture at MIT from 1929 to 1931 and joining his father's architectural firm, Putnam and Cox. In 1936 he made painting his full-time vocation, exhibiting in Boston at the Institute of Modern Art, the Museum of Fine Arts, St. Botolph Club, and the Margaret Brown Gallery; in New York at the Metropolitan Museum of Art; in Pittsburgh at the Carnegie Institute; and Washington, D.C., at the Corcoran Gallery. He taught at the Museum School in Boston and was elected chairman of the department of painting in 1954. In 1951 Cox won the Norman Wait Harris bronze medal at the 60th American Exhibition at the Art Institute of Chicago. Elected to the American Academy of Arts and Sciences in 1955 and associate in the National Academy of Design in 1956, he also was elected to the National Institute of Arts and Letters in 1958. He was an artist-in-residence at the American Academy in Rome in 1961 and was elected trustee in 1963. Cox became known for his portraits of famous and powerful people, including former Secretary of State Dean Rusk; poet Robert Frost; and the late Harvard University president, James B. Conant. He painted more than 300 portraits, including four secretaries of state and seven Supreme Court justices. Cox's portraits hang in the National Portrait Gallery in Washington, D.C., in the Boston Museum of Fine Arts, and at the U.S. Supreme Court.

Peter Egeli (1934–) was born into a family of artists. His father, the Norwegian-American portrait painter Bjorn Egeli, and his mother, Lois Baldwin, taught him the basics of drawing and painting and instilled in him a love and appreciation of great art. In his teens he studied painting at the Corcoran Art School in Washington, D.C., and then did a three-year tour in the United States Marine Corps. Once out of the service, Egeli enrolled at the Maryland Institute of Art in Baltimore, where his principal instructor was Jacques Maroger. After graduating he attended the Art Students League in New York and later George Washington University in Washington, D.C. From 1960 to 1967 Egeli taught drawing and painting at St. Mary's College of Maryland. Since then Egeli has devoted his full time to his career as a portrait and marine artist. He is a charter member and has served as president of the American Society of Marine Artists. He has had numerous solo and group exhibitions and has received many awards, including the Franklin Mint Gold Medal and the Schaefer Art Award.

Lloyd Bowers Embrey (1913–1979), noted Washington, D.C., portrait painter, exhibited widely during his forty-three-year career as an artist. He is represented in numerous collections in the United States and abroad, including those of the Riggs Bank in Stockholm and the U.S. House of Representatives. His work extended well beyond the confines of oil portraiture; his sculpture of President John F. Kennedy, for example, is displayed in New York City’s Harvard Club, and his bronze bust of Nikita Khrushchev, sculpted to commemorate the visit of the Soviet premier to the United States, is in the Kremlin. In addition to his portrait of Secretary of the Air Force Dudley Sharp, he painted two of the Army’s chiefs of staff, J. Lawton Collins and Earle G. Wheeler.

Charles J. Fox is the pseudonym of Leo Fox, a New York City entrepreneur who for many years has commissioned portraits of leading figures in government, business, society, and the professions. The portraits, signed “C. J. Fox,” have been executed by New York artist Irving Resnikoff during a forty-year association with Fox. In addition to Secretary of the Air Force Eugene Zuckert’s portrait, the Fox enterprise claims three portraits of secretaries of the Army—Wilber Marion Brucker, Elvis Jacob Stahr, Jr., and Stephen Ailes.

Germain Green Glidden (1913–1999), portraitist, muralist, and cartoonist, was a fine arts major at Harvard University; attended the Art Students League in New York City; and studied life drawing, painting, and the old masters under Alexander Abels and sculpture under Mahonri Mackintosh Young. In addition to his portrait of Secretary of the Air Force Donald A. Quarles, his several hundred portraits include those of Presidents Ronald Reagan and George Bush and Secretary of the Army Frank Pace, Jr. Glidden maintained a studio in Norwalk, Connecticut, and was founder, president, and chairman of the National Art Museum of Sport, which is housed at the University of Indiana–Purdue University in Indianapolis.

Woodi Ishmael was born in 1914 in Lewis County, Kentucky; was educated in the public schools in Portsmouth, Ohio; and graduated from the Cleveland School of Art. During his career, he illustrated more than thirty-five fiction and nonfiction books. He illustrated for the *Saturday Evening Post*, *Cosmopolitan*, *American*, *Woman’s Home Companion*, and *National Geographic* magazines. His weekly column, “The Power of Faith,” appeared in 175 U.S. and Canadian newspapers. Ishmael was commissioned to do paintings in Panama, Guam, Germany, the Philippines, Vietnam, Japan, and Mexico. For a time he maintained a studio at Troy State University, Troy, Alabama. Many of his works are in private collections; others are housed at the Pentagon, the White House, the Air Force Academy, and the Air Force Museum. He painted fifty-four portraits of the Air Medal of Honor winners. Ishmael had been the artist-in-residence on several cruises of the SS *United States* and the HMS *Queen Elizabeth 2*. He was the only courtroom artist at the murder trial of Jack Ruby. In addition to painting several Air Force chiefs of staff, Ishmael also painted Army Chief of Staff Gen. George Henry Decker.

Alfred H. Jonniaux was born in Brussels, Belgium, at the turn of the twentieth century. He began his art career in London in 1919 and maintained studios there and in Paris. He

became known for portraits of notable European personalities and for character studies of London and Paris “types.” He fled the Nazi occupation of France and established studios in San Francisco and Washington, D.C. His works have been exhibited at the Royal Academy and in shows at the Royal Society of Portrait Painters in London, at the Salon des Artistes Francais in Paris, and at the Palais des Beaux-Arts in Brussels. Besides his portrait of Secretary of the Air Force W. Stuart Symington, he painted portraits of King Leopold II and Queen Astrid of Belgium; Prince Christopher of Greece; Princess Isabelle of France; and U.S. officials such as James F. Byrnes, Edward R. Stettinius, Kenneth Royal, and Clinton Anderson.

Everett Raymond Kinstler (1926–) is a native New Yorker who began his career at age sixteen drawing comic strips and who produced hundreds of magazine illustrations and book covers. He studied at the Art Students League with Frank DuMond and taught at the League from 1969 through 1974. Kinstler ultimately made the transition to portraitist and soon established himself as one of the nation’s foremost portrait painters. He has completed more than five hundred portraits of a variety of subjects, including movie actors, authors, astronauts, university presidents, and cabinet officers. His portraits of public officials, both civil and military, hang in several government departments in the nation’s capital. Kinstler is a member of various art societies and has received a number of awards. In 1993 the National Portrait Gallery in Washington, D.C., acquired fifty of his original works for its permanent collection.

Sandor Klein’s thorough training in portraiture included study at the National Academy of Design in New York City, the L’Academie Julien in Paris, and other art institutions in Germany, Austria, and Hungary. His honors include a Pulitzer Prize and a 1932 fellowship to the American Academy in Rome, Italy. Some of his more prominent subjects were the Schenck and Stream families of the motion picture industry, Agnes Moorhead, Rhonda Fleming, and others. Klein maintained studios in New York City and Los Angeles.

Maxine McCaffrey was raised in Omaha, Nebraska, and attended the Kansas City Art Institute, Denver University, Chouinard Art Institute and the Art Center School in Los Angeles, and the Art Students League in New York. She created illustrations for many periodicals, such as *Family Circle Magazine*, *Coronet*, *Star Weekly*, *Esquire*, *American Weekly*, and various European magazines. She also provided design advertising for Dell Publications, Walt Disney Studios, Universal International, Western Air Lines, Max Factor, Mattel Toys, and Capitol Records. McCaffrey became affiliated with the Air Force Art Program in 1961 and donated more than sixty paintings to the Air Force art collection. She was awarded the Gill Robb Wilson Award at the 1975 Air Force Association convention for a group of dramatic paintings she contributed to the Air Force Art Program. Those paintings documented on canvas, as no other artist had done, the saga of service members missing in action and of prisoners of war in the Vietnam War. McCaffrey died on July 3, 1979.

Albert K. Murray (1907–1992) painted many of the official portraits of leading naval figures and served as director of the Navy’s combat air collection. After winning the Bronze Star

during World War II, he was assigned to paint official Navy portraits. His portrait of Fleet Admiral Chester Nimitz, USN, signing documents aboard the battleship USS *Missouri* during the Japanese surrender ceremony hangs in the Pentagon. Murray's work is included in the collections of the National Portrait Gallery, the National Gallery of Art, and the National Museum of American Art. The Corcoran Gallery of Art in Washington, D.C., has also exhibited his works.

Samuel Edmund Oppenheim (1901–1992) was born in Russia and came to New York with his family in 1906. He studied painting with Charles Hawthorne in Provincetown, Massachusetts, and with George Bridgman at the Art Students League in New York. He lived in the summers on Cape Cod and in the winters in New York City, where he taught at the Art Students League. His early work focused on portraits. His work reminds viewers of the small studies of people painted in the last century by James McNeil Whistler and John Singer Sargent. His paintings of men, women, and children are sensitive, with fluid brush strokes, and distinguished in their rendering of character. In addition to portraiture, his paintings of still life, landscape, flowers, and the figure are included in many private collections throughout the country. Oppenheim's paintings have been exhibited at the National Academy of Design, the Audubon Artists, Allied Artists, the Hudson Valley Art Association, and the Grand Central Art Galleries.

George Pollard grew up on a small farm near Waldo, Wisconsin. As a young boy he liked to draw, and at sixteen he won an art contest advertised in a magazine that enabled him to enroll in the Art Instruction Schools. Pollard credits his parents for their encouragement and effort in paying his tuition and fees during the cash-starved Depression era. "Whatever has happened to me since has been the result of their sacrifice and love," he says. Pollard studied for a year at the Old Layton School of Art in Milwaukee and followed that with a year at the Art Institute of Pittsburgh. He then went to Chicago to serve as an apprentice to Frederick Mizen, renowned artist and instructor. World War II interrupted his training, and Pollard enlisted in the Marine Corps in 1941. He spent the next three years in combat and as a staff artist in the Pacific theater. As a combat artist, he worked with willow charcoal sticks to sketch his portrait subjects. He has painted subjects from both the public and private sectors, including six U.S. presidents, several Supreme Court justices, and Air Force Chief of Staff Gen. Ronald Fogleman.

Robert L. Scharr (1932–) was born in Pasadena, California, on March 9, 1932. He was educated at the Art Center School in Los Angeles and worked as a freelance illustrator for more than fifteen years. He is a member of the Society of Illustrators of Los Angeles and has been president of the California Art Club. His works have been exhibited at the Art Directors Club, Illustration West, and in various one-man shows.

Thomas Edgar Stephens, who died in January 1966, studied at Cardiff School of Fine Arts, the Heatherly School in London, and L'Academie Julien in Paris. He was a member of the Salmagundi Club, the National Arts Club, the University Club in Washington, D.C., and

the Savage Club of London. His works appear at the White House; the National Gallery of Art; the U.S. Supreme Court; the U.S. Treasury and Senate; the Pentagon; Walter Reed Hospital; West Point; the Eisenhower Library; the Legion of Honor Gallery in Paris; and at Cornell, Columbia, and Harvard Universities. Among his subjects were Secretary of State George C. Marshall and Air Force Chief of Staff Carl Andrew Spaatz.

Paul F. Trebilcock was born in Chicago in 1902. He studied at the University of Illinois and the Art Institute of Chicago, as well as in Europe. He exhibited his works at the Art Student League in New York and the Art Institute of Chicago, and his paintings won numerous prizes and awards. His works include portraits of President Franklin D. Roosevelt, various university presidents, and Gen. Thomas D. White.

George A. Weymouth (1936–) was born in Wilmington, Delaware. Encouraged to paint by his artist mother, he sold his first paintings at age eight. He is known for his fine portraits, done in egg tempera, as well as for his landscapes, especially those of the Brandywine Valley. Weymouth is chairman of the board of trustees of the Brandywine Conservancy, an environmental and cultural organization that he founded in 1967. He is also chair of the Conservancy's Museum Committee for its Brandywine River Museum, a century-old gristmill converted to an art museum on the banks of the Brandywine River. Weymouth was one of the artists selected by the National Aeronautics and Space Administration to paint Cape Kennedy during the moon shots. His paintings were later exhibited at the National Air and Space Museum in Washington, D.C. President Richard M. Nixon appointed him to the Commission of Fine Arts on which he served from 1972 to 1977. In 1974 he also served on the Visual Arts Panel of the Pennsylvania Council on the Arts, and in 1981 received the University of Delaware's Merit Award for community service. In 1990 Weymouth received the National Arts Club's annual award.

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