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On February 16, 1956, Robert J. Everett, a former U.S. Air Force pilot turned Lockheed Aircraft Corporation employee, ejected over Arizona at approximately thirty thousand feet after a fire started in his cockpit during a routine training flight.[1] Ten months later, on December 19, 1956, Bob Ericson, another Lockheed Aircraft pilot, was also forced to jettison over Arizona, this time at twenty-eight thousand feet, when his interior oxygen supply became "prematurely depleted."[2] Although aircraft crashes were a frequent occurrence in Arizona during the 1950s and 1960s, these two events were particularly unique. The aircraft were U-2s, and the pilots were actually working for the Central Intelligence Agency (CIA). The U-2 program, which was authorized by President Dwight D. Eisenhower in December 1954, was a clandestine CIA effort charged with high-altitude, deep-penetration reconnaissance overflights of the Soviet Union. The program's namesake aircraft, intentionally misrepresented as a nondescript utility aircraft (i.e., part of the U.S. Air

[1] Allen W. Dulles to Andrew J. Goodpaster, September 22, 1960, Intelligence Matters (19), Box 15, Subject Series, Alphabetical Subseries, Office of the Staff Secretary, White House Office, Dwight D. Eisenhower Presidential Library and Museum, Abilene, Kansas; Drew Pearson and Jack Anderson, "Inside Story of Pilot Powers and His Secret U-2 Spy Flight," *True: The Men's Magazine*, September 1960, p. 78; and Jay Miller, *Lockheed U-2* (Austin, Tex., 1983), 116.

[2] Gregory W. Pedlow and Donald E. Welzenbach, *The CIA and the U-2 Program, 1954–1974* (Washington, D.C., 1998), 80; and Chris Pocock, *Dragon Lady: The History of the U-2 Spyplane* (Osceola, Wisc., 1989), 145.

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Force's U-series), was quite innovative. The U-2 was both sophisticated jet aircraft and elegant sailplane. Capable of Mach 0.85, the single-engine aircraft operated at an altitude of seventy-two thousand feet—almost five times higher than commercial airliners then in operation. At the same time, the U-2 utilized high-aspect ratio wings, similar to those found on performance gliders, which gave the aircraft a range of nearly three thousand miles.[3]

During the Cold War, the U-2 program relied extensively on Arizona. When the CIA originally sought to utilize foreign nationals for the Soviet overflights, several Greek pilots were matriculated into the "USAF jet training course at Williams AFB, Arizona."[4] During the aircraft's test phase in late 1955 and early 1956, U-2 flights were often routed over isolated areas of Arizona and Nevada. In July 1963, the U.S. Air Force, now actively flying its own U-2 missions, relocated the 4080th Strategic Reconnaissance Wing (later 100th Strategic Reconnaissance Wing) to Davis-Monthan Air Force Base (Davis-Monthan AFB) in Tucson. During the next thirteen years, U-2 aircraft from the 4080th would conduct high-altitude air sampling of the stratosphere and reconnaissance overflights of Cuba, Cambodia, Laos, and North Vietnam. Francis Gary Powers, the iconic figure of the U-2 program, was even briefly associated with Arizona. Powers received advanced flight training at Williams Air Force Base (Williams AFB), near Mesa, Arizona, between 1952 and 1953.[5]

This essay examines Arizona during the crucial period between 1945 and 1968, when significant numbers of electronics and aerospace firms established manufacturing and production facilities in the state. This twenty-three-year period, which corresponded to the opening decades of the Cold War, brought profound economic,

[3] Pedlow and Welzenbach, *CIA and the U-2 Program*, 10–11, 25, 32, 37, 40, 46–47, 66, 71–75, 79, 93, 316; Pocock, *Dragon Lady*, 10, 26; David A. Fulghum, "CIA Finally Talks about U-2 Flights," *Aviation Week & Space Technology*, September 28, 1998, pp. 29–31; and Michael R. Beschloss, *Mayday: Eisenhower, Khrushchev and the U-2 Affair* (New York, 1986), 93.

[4] Chris Pocock, *The U-2 Spyplane: Toward the Unknown—A New History of the Early Years* (Atglen, Pa., 2000), 33–35. See also Pedlow and Welzenbach, *CIA and the U-2 Program*, 73–74.

[5] Pocock, *Dragon Lady*, 19–20, 22, 61–62, 87–88, 110; Fritz Kessinger, "File—Davis-Monthan AFB," April 9, 1962, Folder 33, Box 707, Carl T. Hayden Papers (MSS 1), Department of Archives & Manuscripts, University Libraries, Arizona State University, Tempe, Arizona (hereinafter ASU); Miller, *Lockheed U-2*, 42, 117; "Tucson Pilot Disappears on U-2 Flight," *Arizona Republic* (Phoenix), July 29, 1966; and Francis Gary Powers Jr., email message to author, September 16, 2002.

Training flight over the desert. Arizona Historical Society–Tucson collections, MS1255, Charles and Lucile Herbert–Western Ways Features Manuscript and Photographic Collection, Box 35, Folder 535.

social, and political transformations to Arizona.[6] The article documents the emergence of the state's unique postwar defense establishment—an array of interconnected military installations, proving grounds, corporate research laboratories, industrial testing facilities, and airframe and missile production facilities that transformed Arizona into both a battleground and home front of the Cold War.

[6] This subject is explored more fully in Jason H. Gart, "Electronics and Aerospace Industry in Cold War Arizona, 1945–68: Motorola, Hughes Aircraft, Goodyear Aircraft" (PhD dissertation, Arizona State University, 2006). Scholars continue to debate the periodization of the Cold War. For example, some argue that the Cold War's end in 1989—the year the Berlin Wall was dismantled—is misleading since communist regimes continued to thrive in Cuba, North Korea, the People's Republic of China, and Vietnam. For the purpose of this essay, the Cold War will be understood as two progressive stages: the opening decades, 1945–1968, characterized by containment; and the closing decades, 1969–1989, marked by détente. It must be noted, however, that this is just a rough approximation, and as a result, not entirely accurate. See, for example, John Lewis Gaddis, *Strategies of Containment: A Critical Appraisal of Postwar National Security Policy* (New York, 1982), viii–x.

Cold War rearmament connected Arizona into a broader militarized region that extended across the western United States, while emerging Cold War conflicts, such as the Korean War (1950–1953) and Vietnam War (1964–1975), brought a wave of federal largesse to the state. The defense establishment also shaped the state's postwar economic expansion. Arizona reaped the benefit of several new national security policies, in particular, industrial dispersion and decentralization. Indeed, both defense policies proved to be a marked competitive advantage for the state. Throughout the Cold War, Arizona continuously sought to make itself attractive to defense contractors. To this end, political and economic elites were extremely conscious of creating both an inviting and friendly business climate. Finally, the defense establishment effected broad changes in Arizona's society. The antagonism of military officials and defense contractors toward communism and liberalism transformed the state's political landscape in ways that have continued to unfold to the present day.

As Cold War rearmament began in the late 1940s and early 1950s, defense planners and military strategists focused attention on the western United States. The National Security Act of 1947, together with its 1949 amendments, institutionalized military preparedness and long-term strategic planning. As a result of the legislation, the National Security Council and the CIA were created, and the Department of Defense (DOD), comprising the Army, Navy, and Air Force, replaced the antiquated Department of War and Department of the Navy. Defense planners in the DOD, which was headquartered at the Pentagon in Washington, D.C., were the first to envision Arizona as a potential Cold War site. The military's presence during the Second World War, which had consisted of pilot instruction, desert warfare training, the housing of prisoners of war, the internment of Japanese Americans, and the production of matériel, soon transformed into a host of new strategic missions.[7]

Cold War Arizona was most clearly a creation of the Korean War. The conflict, which lasted from June 1950 to July 1953, brought extensive transformations to Arizona's military installations. The

[7] Bernard C. Nalty, ed., *Winged Shield, Winged Sword: A History of the United States Air Force, vol. 1, 1907–1950* (Washington, D.C., 1997), 395–98; Melvyn P. Leffler, *A Preponderance of Power: National Security, the Truman Administration, and the Cold War* (Stanford, Calif., 1992), 175–76, 270–71; and George M. Watson Jr., *The Office of the Secretary of the Air Force, 1947–1965* (Washington, D.C., 1993), 51–54.

effects were substantial and immediate. During the late summer of 1950, Pentagon strategists began planning for the reactivation of Luke Field in Glendale. Established shortly before the U.S. entry into World War II, the airfield had served as the largest wartime training installation for advanced single-engine pilots before its closure in November 1946. On February 1, 1951, the Department of the Air Force reactivated the facility as Luke Air Force Base (Luke AFB) and transferred a newly reorganized 127th Pilot Training Wing to the site. The immediate mission of Luke AFB was to train "combat ready fighter pilots for service with the Far East Air Force in Korea."[8] Students took advanced coursework in aeronautics and received comprehensive flight training, often from returning Korean servicemen, in "the latest techniques . . . of destroying enemy aircraft, equipment, installations, personnel, and means of resistance."[9] As the *New York Times Magazine* reported in 1954, "the job here is to teach a pilot how to use his plane as a weapon."[10]

Other Arizona military facilities were also transformed by the Korean War. In Tucson, Davis-Monthan AFB became a vital Strategic Air Command (SAC) installation headquartering the 36th Air Division, the 43rd Bombardment Wing, the 303rd Bombardment Wing, and the 803rd Air Base Group. The SAC base was responsible for "maintain[ing] an air striking force capable of immediate long range offensive operations" and was protected by two Nike Hercules surface-to-air missile batteries.[11] Williams AFB trained

[8] Jean Provence, "History, Period of Federal Activation, 127th Pilot Training Wing," February 1, 1951, through October 31, 1952, p. 2, Jean Provence Papers, ASU; Jean Provence, "History of 127th Pilot Training Wing, Luke Air Force Base, Phoenix, Arizona," February 1, 1951, through March 31, 1951, p. 17, Provence Papers, ASU; Jean Provence, "Luke Field During World War II," February 1954, p. 8, Provence Papers, ASU; Charles Ynfante, "Arizona During the Second World War, 1941–1945: A Survey of Selected Topics" (PhD dissertation, Northern Arizona University, 1997), 66–68; James E. Cook, "Making War in the Sunshine," *Arizona Republic*, December 3, 1978; Jean Provence, "History, Period of Federal Activation, 127th Pilot Training Wing," February 1, 1951, through October 31, 1952, p. 2, Provence Papers, ASU; Jean Provence, "History of 127th Pilot Training Wing, Luke Air Force Base, Phoenix, Arizona," February 1, 1951 through March 31, 1951, pp. 1, 23, Provence Papers; and Jean Provence, "History, Period of Federal Activation, 127th Pilot Training Wing," February 1, 1951 through October 31, 1952, p. 3, Provence Papers.

[9] Provence, "History of 127th Pilot Training Wing," February 1, 1951–March 31, 1951, pp. 1, 38, 58, Provence Papers, ASU.

[10] C. B. Palmer, "The Making of a Jet Pilot." *New York Times Magazine*, May 2, 1954, p. 12.

[11] "History of the 36th Air Division and the 803d Air Base Group, Davis-Monthan Air Force Base, Tucson, Arizona," July 1954, pp. 1, 49, Call Number K-DIV-36-HI, Roll Number 11317, Iris Reference P0556, Air Force Historical Research Agency, Maxwell AFB, Alabama (hereinafter AFHRA); "Information for Members of Congress," September 10, 1958, Folder 13, Box 476, Hayden Papers; and "Nike Hercules Offers Feeling Of Security,"

Lt. Barry Goldwater, second from left, and unidentified officers in front of an office building at the newly built Luke Army Air Field. Arizona Historical Society–Tempe collections, Ruth Reinhold Aviation Collection, MSS 14, Series IV: Photographs, Box 19, Folder 13.

undergraduate pilots, while the Navajo Ordnance Depot (later Navajo Army Depot), located twelve miles west of Flagstaff at Bellemont, became an important demilitarization center for "outdated or unserviceable" conventional and chemical weapons.[12] Finally, northeastern Arizona, and particularly Monument Valley in the Colorado Plateau, emerged as an important site for uranium mining. During the 1950s and 1960s, Arizona mines, supported by the Atomic Energy Commission, produced significant quantities of uranium ore for America's nuclear weapon arsenal.[13]

Tucson Daily Citizen, September 15, 1958.

[12] Kay Pepper, *Historic Preservation Plan for Williams Air Force Base, Arizona* (Williams Air Force Base, Ariz., 1992), 3; and John S. Westerlund, *Arizona's War Town: Flagstaff, Navajo Ordnance Depot, and World War II* (Tucson, Ariz., 2003), 69–71, 231–38.

[13] Robert N. Snelling, "Environmental Survey of Uranium Mill Tailings Pile, Monument Valley, Ariz.," *Radiological Health Data and Reports* 11 (Oct. 1970): 511–17; and Herbert H. Lang, "Uranium Also Had Its 'Forty-Niners," *Journal of the West* 1 (Oct. 1962): 161–69.

As the Cold War advanced during the 1950s and early 1960s, Arizona also became part of a broader militarized region, which extended across the western United States. Pentagon defense planners in both the Eisenhower and Kennedy administrations sought to regain the scientific and technological edge that appeared lost after the Soviet Union successfully tested the first intercontinental ballistic missile (ICBM) on August 26, 1957, and launched the first artificial earth satellite, *Sputnik I*, on October 4, 1957.[14] President Eisenhower, who later confided that the dual Soviet achievements had "jarred us out of what might have been a gradually solidifying complacency in technology," accelerated federal expenditures on ballistic missile research and established the National Aeronautics and Space Administration (NASA).[15] President John F. Kennedy, who had utilized the public perception of a missile gap to his considerable advantage during the 1960 presidential campaign, sought ambitious increases in defense spending. This renewed emphasis on military and civilian research and development (R&D) had a transforming effect on several testing sites and proving grounds in the West.[16]

For example, the Nevada Test Site, northwest of Las Vegas, Nevada, became the location for approximately one hundred aboveground, or atmospheric, nuclear tests between 1951 and 1963. White Sands Proving Ground (later White Sands Missile Range) east of Las Cruces, New Mexico, also rapidly expanded during this period. Utilized by the army, navy, and air force, by 1959 the proving

[14] Charles C. Alexander, *Holding the Line: The Eisenhower Era, 1952–1961* (Bloomington, Ind., 1975), 214–15; and Walter LaFeber, *America, Russia, and the Cold War, 1945–2000* (New York, 2002), 203–204. The extent of American unpreparedness for *Sputnik I*, and its successor *Sputnik II*, launched November 3, 1957, was particularly startling. Indeed, the initial response by the U.S. military was quite telling. In October 1957, Pentagon officials began Project Pig Iron, which directed the U.S. Air Force in California and Arizona "to be on alert for the return into the earth's atmosphere of Russia's Sputnik I rocket booster." If it were sighted, air force personnel were directed to "take careful notes" so that the booster could later "be recovered and sent . . . by plane to the Air Technical Intelligence Center" at Wright-Patterson Air Force Base in Ohio. See "Study No. 15, History of San Bernardino Air Materiel Area, Norton Air Force Base, San Bernardino, California," July 1, 1957–December 31, 1957, pp. 104–105, Call Number K205.12-34, Roll Number 14777, Iris Reference K2226, AFHRA.

[15] Dwight D. Eisenhower, *The White House Years, vol. 2, Waging Peace: 1956–1961* (Garden City, N.Y., 1965), 211, 226; Robert L. Perry, *The Ballistic Missile Decisions* (Santa Monica, Calif., 1967), 17–20; and Jacob Neufeld, *The Development of Ballistic Missiles in the United States Air Force, 1945–1960* (Washington, D.C., 1990), 169–76.

[16] Michael R. Beschloss, *The Crisis Years: Kennedy and Khrushchev, 1960–1963* (New York, 1991), 165–66; Gaddis, *Strategies of Containment*, 226–27; Stephen E. Ambrose and Douglas G. Brinkley, *Rise to Globalism: American Foreign Policy since 1938* (New York, 1997), 174–75.

President Dwight D. Eisenhower after arriving at Davis-Monthan Air Force Base in Tucson, January 15, 1957. Arizona Historical Society–Tucson collections, PC 214, Tucson Citizens Photographs, ca. 1950–1969, Folder 77, #B8.

ground had become the principal "overland rocket and guided missile testing center in the United States."[17] Less well known, but just as strategic, was the U.S. Army Electronic Proving Ground at Fort Huachuca, Arizona. Located in southern Arizona approximately twenty miles from the Mexican border, Fort Huachuca's origins dated to the Indian wars of the late nineteenth century. Deactivated after World War II, the base was briefly utilized between 1951 and 1953 as a training facility for aviation engineers. In February 1954, Fort Huachuca was reactivated as an electronic proving ground under the command of the Chief Signal Officer of the Department

[17] Terrence R. Fehner and F. G. Gosling, *Origins of the Nevada Test Site* (Washington, D.C., 2000), 1–2, 82; Matthew Coolidge, *The Nevada Test Site: A Guide to America's Nuclear Proving Ground* (Culver City, Calif., 1996), 9; Richard L. Miller, *Under the Cloud: The Decades of Nuclear Testing* (New York, 1986), 8; and Eunice H. Brown, James A. Robertson, John W. Kroehnke, Charles R. Poisall, and E. L. Cross, *White Sands History: Range Beginnings and Early Missile Testing* (White Sands, N.Mex., 1959), i, 14–15, 24–25.

of the Army. The installation, which replaced the congested proving grounds at Fort Monmouth, New Jersey, offered an isolated setting with a "relative lack of radio interference."[18] Spanning nearly seventy thousand acres and including secondary test sites near Gila Bend and in Tucson, Fort Huachuca's mission was to "provide facilities, scientists, and troops for the testing and evaluation of new forms of electronic . . . systems for future American armies on the battlefield."[19] Researchers at Fort Huachuca focused on a variety of technical issues: field testing the Aerojet General SD-2 Overseer, an early unmanned surveillance drone; developing electronic warfare techniques, including electronic countermeasures and electronic counter-countermeasures; and managing, after 1967, the secure "global hot line" between the United States and the Soviet Union.[20] Finally, in southwestern Arizona, adjacent to the Colorado River, the U.S. Army Yuma Test Station (later U.S. Army Yuma Proving Ground), which had closed after World War II, was reactivated in April 1951. Within four years, the facility, which encompassed nearly 870,000 acres, had become one of the primary installations "for desert environmental testing."[21]

Arizona's burgeoning defense establishment did not go unnoticed in the Soviet Union. In October 1961, U.S. Air Force officials in the Phoenix Air Force Contract Management District discovered that the Soviets had contacted the Phoenix offices of the Nuclear Corporation of America in an attempt to request "certain information on rare earth metals . . . in connection with work performed

[18] Cornelius C. Smith Jr., *Fort Huachuca: The Story of a Frontier Post* (Fort Huachuca, Ariz., 1977), 23–38, 312–18; Robert C. Stone, "An Economic Study of Sierra Vista-Fort Huachuca," circa 1959, p. 3, Folder 19, Box 563, Hayden Papers; and "U.S. Army Electronic Proving Ground, Fort Huachuca, Arizona," undated, Folder 5, Box 404, Hayden Papers.

[19] *Unofficial Guide to Fort Huachuca* (Sierra Vista, Ariz., n.d.), 11; and Philip J. Webster, "Fort Huachuca, Arizona: Headquarters, United States Army Electronic Proving Ground," *U.S. Lady*, September 1959, pp. 21–22. See also James D. O'Connell, "Electronic Industry is Big Combat Readiness Asset," *Western Electronic News*, December 1956, pp. 6–7.

[20] "U.S. Army Electronic Proving Ground, Fort Huachuca, Arizona," undated, Folder 5, Box 404, Hayden Papers; Robert J. Sarti, "Global Hot Line Operated by New Huachuca Unit," *Arizona Republic*, May 24, 1967; and Laurence R. Newcome, *Unmanned Aviation: A Brief History of Unmanned Aerial Vehicles* (Reston, Va., 2004), 71–75. During the late 1950s and 1960s, several electronics and aerospace companies, including Hargraves Electronics Corporation, established manufacturing facilities adjacent to Fort Huachuca. The firms viewed their proximity to the electronic proving ground as an important competitive advantage. See N. G. Hargraves to Roy Elson, February 13, 1962, Folder 5, Box 404, Hayden Papers.

[21] U.S. Department of the Army, *Installation Environmental Impact Assessment for United States Army Yuma Proving Ground, Yuma, Arizona*, 2nd ed. (Colorado Springs, Colo., 1978), A-1, A-12, A-13.

under [U.S. Air Force] Contract AF 33(616)6829."[22] An important defense subcontractor with expertise in advanced materials research, Nuclear Corporation of America manufactured a range of specialized products including "diodes, capacitors, rare earth metals, oxides and salts, [and] spectrographic services."[23] Although the company declined to provide the information and immediately contacted U.S. Air Force officials, the incident served as an apt warning. Shortly thereafter, the Department of State, in consultation with the Department of Defense and the Department of Justice, determined that "the city of Phoenix will be closed to visits by Soviet citizens" in order to protect the "internal security" of the United States.[24]

Arizona defense installations also played a vital role in the distribution of military assistance to foreign governments. The creation of the North Atlantic Treaty Organization (NATO) in April 1949 aligned the United States with the defense of western Europe. The Mutual Defense Assistance Act of 1949, which became law shortly thereafter, offered alliance members "military assistance in the form of equipment, materials, and services."[25] The Truman administration, hoping to contain the spread of communism, promptly labored to extend United States military aid to other nations. The Mutual Security Act of 1951 and its later amendments authorized military assistance to Latin America, both for hemispheric defense and for internal security. Indeed, the transfer of military equipment to foreign nations soon became a significant enterprise for the United States. Complex interservice agencies, such as the Mutual Defense Assistance Program (MDAP), and later the Mutual Security Program (MSP), were established to "organize, train and equip air units" in an array of countries.[26] Arizona installations, including the U.S. Naval

[22] "History # 15, History of Phoenix AF Contract Management District, Western Contract Management Region, Phoenix, Arizona," July 1, 1961–December 31, 1961, p. 4, call number K243.073-16, roll number 15537, Iris Reference K2985, AFHRA.

[23] "Industry Views: Phoenix and the Valley of the Sun," circa 1964, p. 20, FE EPH WI-55, Arizona Historical Foundation, Hayden Library, ASU.

[24] "History # 15, History of Phoenix AF Contract Management District," AFHRA; and William B. Macomber Jr. to Carl Hayden, January 6, 1961, Folder 25, Box 530, Hayden Papers.

[25] Robert H. Connery and Paul T. David, "The Mutual Defense Assistance Program," *American Political Science Review* 45 (June 1951): 323–27; and Harold A. Hovey, *United States Military Assistance: A Study of Policies and Practices* (New York, 1965), 8–9.

[26] Michael J. Francis, "Military Aid to Latin America in the U. S. Congress," *Journal of Inter-American Studies* 6 (July 1964): 389–91; John Duncan Powell, "Military Assistance and Militarism in Latin America," *Western Political Quarterly* 18 (June 1965): 382; James C. Haahr, "Military Assistance to Latin America," *Military Review* 49 (May 1969): 12–14; John

Air Facility, Litchfield Park (Litchfield NAF) and Davis-Monthan AFB, which had served as storage facilities for obsolete and reserve aircraft in the immediate postwar years, were quickly transformed into refurbishment and modification centers. Arizona's unique low-humidity climate and close proximity to Latin America meant that well-preserved aircraft with limited overhaul needs could be inexpensively transported or, in some cases, flown directly to foreign governments.[27]

Throughout the 1950s and 1960s, thousands of military aircraft from Litchfield NAF and Davis-Monthan AFB were sold abroad—to Argentina, Bolivia, Brazil, Denmark, France, Honduras, Japan, the Netherlands, Portugal, and Uruguay. Yugoslavia, in particular, became an important recipient of military assistance. A communist state led by Josip Broz, or Marshal Tito, the country broke from Soviet dominance in 1948. Pentagon defense planners, who desired to keep Yugoslavia independent from Moscow, provided extensive aid to Tito's regime. Between 1950 and 1955, the country received nine Republic F-84 Thunderjet aircraft squadrons through the MDAP, many from Davis-Monthan AFB. In 1960, Litchfield NAF delivered fifty Lockheed TV-2 Shooting Star aircraft to Yugoslavia, an undertaking that required the "manufacturing . . . [of] crates and fittings of sufficient size to package . . . [the] aircraft complete."[28]

M. Baines. "U.S. Military Assistance to Latin America: An Assessment," *Journal of Interamerican Studies and World Affairs* 14 (November 1972): 472–74; George S. Boylan Jr., "Current and Future USAF Mutual Defense Assistance Programs," Air War College Thesis No. 908, May 1955, p. 11, Air University Library, Department of the Air Force, Maxwell AFB, Alabama (hereinafter AUL); and "Remarks of the President to the Citizens Committee for International Development in the Rose Garden," July 10, 1961, "Remarks Upon Signing of the Plans for Progress, 7/12/61" Folder, Box 35, POF, John F. Kennedy Presidential Library, Boston.

[27] "History of the U.S. Naval Air Facility, Litchfield Park," undated, Litchfield Park Naval Air Station Aviation History, Microfiche No. F-2063, Operations Archives Branch, Naval Historical Center, Washington Navy Yard, D.C. (hereinafter cited as Litchfield Park NASAH); "500 Moth-balled Navy Planes 'Revved Up' in 400-Acre Desert Parking Lot in Arizona," *New York Times*, July 31, 1950; "Navy Facility Money Saver," *Arizona Republic*, January 26, 1963; Dorothy W. Trester, "History of the AF Storage and Withdrawal Program, 1945–1952," April 1954, pp. 13–15, 21, 24, 74, call number K201-74, Iris Reference K2018, AFHRA; and Willis Peterson, "World Plane Mart," *Arizona Republic*, October 11, 1959.

[28] Thomas Kelland, "Litchfield Credit to Navy, Valley," *Arizona Republic*, February 15, 1961; "History #13, History of Phoenix Air Procurement District, Western Contract Management Region, Phoenix, Arizona," July 1, 1960–December 31, 1960, p. 31, call number K204.602, roll number 14620, Iris Reference K2070, AFHRA; "Study No. 14, History of San Bernardino Air Materiel Area, Norton Air Force Base, San Bernardino, California," January 1–June 30, 1957, pp. 33–34, call number K205.12-34, roll number 14777, Iris Reference K2226, AFHRA; Phyllis Auty, "Yugoslavia and the Cold War," in *The Impact of the Cold War: Reconsiderations*, ed. Joseph M. Siracusa and Glen St. John Barclay (Port Washington, N.Y.,

Airplanes at the U.S. Naval Air Facility in Litchfield Park. Arizona Historical Society-Tucson collections, MS 1255, Charles and Lucile Herbert–Western Ways Features Manuscript and Photographic Collection, Box 35, Folder 535.

Another beneficiary of military assistance was El Salvador. The smallest country in Central America, El Salvador was governed throughout the 1950s and 1960s by a succession of military regimes. In late 1958, Litchfield NAF transferred several Chance-Vought FG-1 Corsair aircraft to the country.[29] The sale, which also

1977), 125, 128–30; Stephen C. Markovich, "American Foreign Aid and Yugoslav Internal Policies," *East European Quarterly* 9 (Summer 1975): 185–87; Lorraine M. Lees, *Keeping Tito Afloat: The United States, Yugoslavia, and the Cold War* (University Park, Pa., 1997), 107–10, 176–77; George S. Boylan Jr., "Current and Future USAF Mutual Defense Assistance Programs," Air War College Thesis No. 908, May 1955, pp. 13–14, AUL; and "Command History, U.S. Naval Air Facility, Litchfield Park, Phoenix, Arizona," 1960, Litchfield Park NASAH.

[29] Walter LaFeber, *Inevitable Revolutions: The United States in Central America* (New York, 1984), 172–74; Enrique A. Baloyra, *El Salvador in Transition* (Chapel Hill, N.C., 1982), 17–18; Don L. Etchison, *The United States and Militarism in Central America* (New York, 1975), 28–32; A. B. Campbell to All Department Personnel, December 1, 1958, Folder 3, Box 346, Hayden Papers; Willis Peterson, "World Plane Mart," *Arizona Republic*, October

included the training of Salvadoran pilots in Arizona, was a significant boost for Lieutenant Colonel José María Lemus, El Salvador's repressive autocrat. Indeed, the United States ambassador to El Salvador, Murat W. Williams, later criticized the military assistance program as "a strong handicap to our policy of encouraging democratic development in Central America."[30]

Finally, MDAP and MSP obligations also brought a large number of foreign nationals to Arizona for military training. Beginning in 1957, military pilots from West Germany received flight instruction at Luke AFB. In 1958 and 1959, military personnel from the United Kingdom attended the Thor Missile School at Douglas Aircraft Company in Tucson. During the 1960s, Williams AFB trained military pilots and ground crews from Canada, Iran, Norway, the Philippines, South Korea, South Vietnam, Thailand, and Turkey. Several of the students were also foreign dignitaries. For example, in 1964, Lieutenant Fahad bin Abdallah bin Muhammad Al Saud al-Kabir, the nephew of King Faisal of Saudi Arabia, was stationed at Williams AFB in "preparation for assumption of duties in the Royal Saudi Arabian Air Force."[31]

Cold War Arizona also served as an important clandestine location of the CIA. Throughout the 1960s, Arizona was both a staging ground and embarkation point for a host of covert operations, including intelligence gathering, insurgency training, and paramilitary support. Arizona's relationship with the CIA was forged in the aftermath of the failed April 1961 invasion of Cuba at the Bay

11, 1959; and Joseph O. Boyce, interview by Jason H. Gart, June 6, 2002, transcript in author's possession.

[30] Thomas P. Anderson, *The War of the Dispossessed: Honduras and El Salvador, 1969* (Lincoln, Neb., 1981), 27–28; Tommie Sue Montgomery, *Revolution in El Salvador: Origins and Evolution* (Boulder, Colo., 1982), 71–72; and Murat W. Williams to Department of State, February 28, 1964, El Salvador—vol. I, 1/64–11/68, Box 54, Country File El Salvador, National Security File, Lyndon B. Johnson Library and Museum, Austin, Texas (hereinafter LBJ Library).

[31] Charles Windle and T. R. Vallance, "Optimizing Military Assistance Training," *World Politics* 15 (Oct. 1962): 91–92; "History #10, History of Arizona Air Procurement District, San Bernardino Air Material Area, Phoenix, Arizona," January 1, 1959–June 30, 1959, p. 38, call number K204.602, roll number 14620, Iris Reference K2070, AFHRA; "History #9, History of Arizona Air Procurement District, San Bernardino Air Material Area, Phoenix, Arizona," July 1, 1958–December 31, 1958, p. 33, call number K204.602, roll number 14620, Iris Reference K2070, AFHRA; John M. Steadman to Jack Valenti, January 11, 1966, Department of Defense, January 1966, Container 115, Confidential File, White House Central Files (hereinafter WHCF), LBJ Library; John M. Steadman to Robert E. Kintner, June 20, 1967, Department of Defense, June 1967, Container 121, Confidential File, WHCF, LBJ Library; John M. Steadman to Jack Valenti, November 9, 1965, Department of Defense, November 2–16, 1965, Container 114, Confidential File, WHCF, LBJ Library.

of Pigs. The attempt to depose Fidel Castro by CIA-trained Cuban exiles brought wide-ranging rebuke and led to an extensive restructuring within the agency.[32] Most noticeably, emphasis was placed on increasing the number of CIA air proprietaries.[33] First developed in 1950 by Lawrence R. Houston, the CIA general counsel, air proprietaries were "CIA-created and controlled business entities," such as aviation companies and commercial airlines, which provided "'cover' and support for covert operations and the performance of administrative tasks."[34] Under the leadership of George A. Doole Jr., a former airline executive, the CIA air proprietary network was rapidly enlarged to include "nearly 20,000 people and . . . some 200 planes."[35] As part of this expansion, Intermountain Aviation, Inc., was established in Arizona on September 25, 1961.[36] Located on East Buckeye Road in Phoenix, the company described itself as an "aircraft charter and rental service."[37] Supporting this cover story

[32] Trumbull Higgins, *The Perfect Failure: Kennedy, Eisenhower, and the CIA at the Bay of Pigs* (New York, 1987), 154–76. See also Thomas Powers, *The Man Who Kept the Secrets: Richard Helms & the CIA* (New York, 1979), 115–18; John Ranelagh, *The Agency: The Rise and Decline of the CIA* (New York, 1987), 377–82; Peter Grose, *Gentleman Spy: The Life of Allen Dulles* (Boston, 1994), 521–28; and Peter Kornbluh, ed., *Bay of Pigs Declassified: The Secret CIA Report on the Invasion of Cuba* (New York, 1998), 10–17.

[33] One investigative journalist opined that the CIA failure at the Bay of Pigs "convinced the [a]gency that it could not depend on the U.S. Air Force for air cover and needed its own strike force." See Christopher Robbins, *Air America* (New York, 1985), 64.

[34] Gary M. Breneman, "Lawrence R. Houston: A Biography," *Studies in Intelligence* 30 (Spring 1986): 7–9; and U.S. Commission on CIA Activities Within the United States, *Report to the President* (Washington, D.C., 1975), 215–17. John Prados of the National Security Archive has asserted that Richard M. Helms, CIA director between 1966 and 1973, "ordered . . . an agency review of air proprietaries in the late 1960s." The report, however, "has never been declassified." See John Prados, email message to author, February 26, 2004.

[35] Victor Marchetti and John D. Marks, *The CIA and the Cult of Intelligence* (New York, 1974), 150–53; William M. Leary, *Perilous Missions: Civil Air Transport and CIA Covert Operations in Asia* (University, Ala., 1984), 173–77; William M. Leary, "Doole, George Arntzen," in John A. Garraty and Mark C. Carnes, eds., *American National Biography*, vol. 6 (New York, 1999), 737–38; and Evan Thomas, "In Arizona: A Spymaster Remembered," *Time*, April 7, 1986, p. 12.

[36] "Intermountain Aviation, Inc.," File 58780, Arizona Corporation Commission, State of Arizona, Phoenix, Arizona. See also U.S. Commission on CIA Activities, *Report to the President*, 218; Lloyd N. Cutler to Jody Powell, March 24, 1980, Counselor—Cutler, Iran—Shah, 3—80, Presidential Papers, Staff Offices, Jimmy Carter Presidential Library and Museum, Atlanta, Georgia; and John Marks, "A Kafka Story, But It's True," *Playboy*, August 1975, p. 54. As part of Intermountain's incorporation, Marana Air Park, Inc., was also established to administer "air parks, airports and all facilities, equipment and areas suitable for the taking off or landing of aircraft." See "Marana Air Park, Inc.," File 58881, Arizona Corporation Commission, State of Arizona, Phoenix, Arizona; and James Long and Lauren Cowen, "Buyout from CIA Boosts Evergreen Helicopters," *Oregonian*, August 15, 1988.

[37] *The Mullin-Kille Phoenix Arizona Con Survey City Directory 1963*, p. 40, Phoenix City Directory Con Survey, Pt. 1, 1963, DAM, ASU; and *The Mullin-Kille Phoenix Arizona Resident Direc-*

were Orme Lewis and Robert C. Kelso, attorneys at Lewis, Roca, Scoville, Beauchamp, & Linton, who served as both incorporators and corporate officers of the air proprietary.[38] In reality, however, it was Garfield "Gar" M. Thorsrud who directed Intermountain.[39] An experienced parachutist and former U.S. Forest Service smoke jumper, Thorsrud had worked for the CIA intermittently throughout the early 1950s. In mid-1956, Thorsrud was recruited into the agency's Air Branch, where, as part of the Far East Division and later the Development Projects Division, he participated in several covert operations, including the Bay of Pigs invasion.[40] In early 1962, Intermountain, part of the Special Operations Division of the Air Branch, moved to Marana Air Park, a deactivated military base situated twenty-eight miles northwest of Tucson.[41]

tory and Cosmopolitan Telephone Directory 1963, p. 584, Phoenix City Directory Con Survey, Pt. 2, 1963, DAM, ASU.

[38] "Intermountain Aviation, Inc.," File 58780, Arizona Corporation Commission, State of Arizona, Phoenix, Arizona; and David M. Alpern, "How the CIA Does 'Business,'" *Newsweek*, May 19, 1975, p. 25, 27–28. Orme Lewis was a well-known Phoenix attorney who had served as assistant secretary of the Department of Interior. Robert C. Kelso practiced international law with the Department of Defense before joining Lewis, Roca, Scoville, Beauchamp, & Linton as senior partner in 1959. A third incorporator, Robert E. Roberts of Sonora Flying Service, Inc., was selected by the CIA to "serve as . . . [the] front man during Intermountain's first three years of operation." See "Lewis, Orme," in *Who's Who in America*, vol. 2, *1984–1985*, 43rd ed. (Chicago, 1984), 1972; "Kelso, Robert Charles," in ibid., 1:1750; James Long and Lauren Cowen, "Buyout from CIA Boosts Evergreen Helicopters," *Oregonian*, August 15, 1988; and James Long and Lauren Cowen, "CIA Air Proprietary Kept Arizona Air Park Humming," *Oregonian*, August 22, 1988.

[39] William M. Leary and Leonard A. LeSchack, *Project Coldfeet: Secret Mission to a Soviet Ice Station* (Annapolis, Md., 1996), 120; and "Incomplete List of Intermountain Employees—1972/73," undated, Intermountain: Evergreen People, Folder 20, Box 15, James Long Collection, The CAT/Air America Archive, Special Collections Department, The University of Texas at Dallas, Richardson, Texas (hereinafter cited as CAT/Air).

[40] Leary and LeSchack, *Project Coldfeet*, 107–20; Kenneth Conboy and James Morrison, *The CIA's Secret War in Tibet* (Lawrence, Kans., 2002), 56–57, 285n2; and Long and Cowen, "Buyout from CIA Boosts Evergreen."

[41] Long and Cowen, "CIA Air Proprietary." Marana Air Park, which spans 2,200 acres, was constructed during the Second World War. Originally designated Marana Army Air Field, the installation was reactivated as Marana Air Base during the Korean War. Beginning in August 1951, Marana Air Base was operated by Beiser Aviation Corporation, a civilian contractor that provided flight training and aircraft maintenance for the Department of the Air Force. Although Marana Air Base was deactivated in 1958, Beiser continued to provide limited refurbishment and overhaul services at the installation. For example, in 1959, several H-21 helicopters were modified by Beiser "under two contracts totaling nearly half a million dollars." See "A Brochure: Beiser Aviation Corp., Tucson, Arizona," May 6, 1957, pp. 1, 2, 4, 9, Folder 46, Box 175, Hayden Papers; Wallace Beene, "Air Force Folds Up Its Marana Training Program," *Tucson Daily Citizen*, June 26, 1957; and "History #11, History of Arizona Air Procurement District, San Bernardino Air Material Area, Phoenix, Arizona," July 1 1959–December 31, 1959, p. 51, call number K204.602, roll number 14620, Iris Reference K2070, AFHRA.

With upward of $2 million in assets and a cadre of CIA employees, including aircraft conversion experts, aerial delivery technicians, paramilitary specialists, master parachutists, and pilots, Intermountain began a host of clandestine assignments.[42] Between May and June 1962, the company provided logistical support for Project Coldfeet, an Office of Naval Research (ONR) mission to an abandoned Soviet research station in the Arctic.[43] With the assistance of inventor Robert E. Fulton Jr., of the Robert Fulton Company in Newtown, Connecticut, Intermountain deployed a sophisticated aerial retrieval system, known as the Fulton Skyhook, which enabled ONR personnel and discarded Russian equipment to be lifted from the ground to an airborne B-17 aircraft.[44] Intermountain also provided operational support for the "secret war" in northern Laos.[45] During the summer of 1962, Marana Air Park served as a training facility for CIA case officers assisting Hmong tribesmen in the insurgency campaign against the North Vietnamese.[46]

Intermountain offered instruction on low-level parachute drops and pilot certification in short takeoff and landing (STOL) aircraft.[47] Intermountain also played a vital role in Tibet.[48] The country, which had been invaded by the People's Republic of China in October 1950 and whose spiritual leader, the Dalai Lama, had fled into exile in March 1959, was the location of a CIA-backed covert war.[49] Between 1963 and 1965, Intermountain provided

[42] "Intermountain Aviation, Inc.," File 58780, Arizona Corporation Commission, State of Arizona, Phoenix, Arizona; Long and Cowen, "Buyout from CIA Boosts Evergreen"; Long and Cowen, "CIA Air Proprietary"; Conboy and Morrison, *CIA's Secret War in Tibet*, 285n2; and Leary and LeSchack, *Project Coldfeet*, 120. See also Harvey Stone, interview by Jason H. Gart, April 16, 2002, transcript in author's possession.

[43] A detailed account of this intelligence-gathering mission is provided by Leary and LeSchack, *Project Coldfeet*. See also William M. Leary, "Robert Fulton's Skyhook and Operation COLDFEET," *Studies in Intelligence* 38 (1995): 99–109.

[44] "Intermountain Aviation, Inc.," File 58780, Arizona Corporation Commission, State of Arizona, Phoenix, Arizona; James Bamford, *Body of Secrets: Anatomy of the Ultra-Secret National Security Agency from the Cold War through the Dawn of a New Century* (New York, 2001), 142–46; and Scott A. Thompson, *Final Cut: The Post-War B-17 Flying Fortress: The Survivors*, rev. ed. (Missoula, Mont., 2000), 138–43.

[45] George C. Herring, *America's Longest War: The United States and Vietnam, 1950–1975* (New York, 1996), 86; and William M. Leary, "Supporting the 'Secret War': CIA Air Operations in Laos, 1955–1974," *Studies in Intelligence* (Winter 1999–2000): 76–77.

[46] Jane Hamilton-Merritt, *Tragic Mountains: The Hmong, the Americans, and the Secret Wars for Laos, 1942–1992* (Bloomington, Ind., 1993), 120–23.

[47] Long and Cowen, "CIA Air Proprietary."

[48] Marchetti and Marks, *CIA and the Cult of Intelligence*, 143.

[49] See especially Conboy and Morrison, *CIA's Secret War in Tibet*. See also John Kenneth Knaus, *Orphans of the Cold War: America and the Tibetan Struggle for Survival* (New York,

transport for the Tibetan resistance, flying paramilitary forces via India and Nepal to an agency training base known as Camp Hale near Leadville, Colorado.[50] Throughout its period of operation, Arizona political elites remained silent on the activities at Marana Air Park. Senator Carl T. Hayden, who as chairman of the U.S. Senate Appropriations Committee between 1955 and 1969 participated in the oversight of the CIA, summed up the view of many when he quipped: "I don't want to know what they're doing. If I did know, then I would be responsible."[51]

Pentagon defense planners also shaped Arizona's postwar economic expansion. During the 1950s and 1960s, numerous defense-related manufacturing and production facilities were established in Arizona. Indeed, this period saw a profound increase in the state's industrial capacity, in many ways comparable to the important economic readjustments of the Second World War. The Defense Production Act, which became law on September 8, 1950, focused nationwide attention on the issue of industrial preparedness. Initiated to meet the procurement needs of the Korean War as well as the broader global struggle against communism, the legislation formalized bureaucratic support of defense-related industries. The law utilized business-friendly measures, such as government-owned plants, substantial tax incentives, direct and guaranteed loans, and specialized research grants, to permanently mobilize the American economy.[52]

While successful, the act neglected to incorporate a dispersion or decentralization policy. Dispersion and decentralization,

1999), 137–59.

[50] "Intermountain Aviation, Inc.," File 58780, Arizona Corporation Commission, State of Arizona, Phoenix, Arizona; Conboy and Morrison, *CIA's Secret War in Tibet*, 84–85, 106–18, 182, 188–95; and Ranelagh, *Rise and Decline of the CIA*, 335–36. Another CIA air proprietary, Arizona Helicopters Incorporated, based in Chandler, also provided logistical support for agency operations in Tibet. See "Arizona Helicopters, Incorporated," File 60020 and F-15856, Arizona Corporation Commission, State of Arizona, Phoenix, Arizona; James A. Cunningham Jr. to William R. Leonard, September 28, 1973, Arizona Helicopters, Folder 5, Box 32, C.I.A. Corporate Records, CAT/Air; and Robbins, *Air America*, 64–65.

[51] Stewart L. Udall, *The Myths of August: A Personal Exploration of Our Tragic Cold War Affair with the Atom* (New York, 1994), 7. See also Ross R. Rice, *Carl Hayden: Builder of the American West* (Lanham, Md., 1994), 175–77; and Ranelagh, *Rise and Decline of the CIA*, 281–85.

[52] Leon N. Karadbil and Roderick L. Vawter, "The Defense Production Act: Crucial Component of Mobilization Preparedness," in *Mobilization and the National Defense*, ed. Hardy L. Merritt and Luther F. Carter (Washington, D.C., 1985), 37–38; Roderick L. Vawter, *Industrial Mobilization: The Relevant History*, rev. ed. (Washington, D.C., 1983), 15–22, 41–44; and Timothy D. Gill, *Industrial Preparedness: Breaking with an Erratic Past* (Washington, D.C., 1984), 10–12.

Moving a B-48 at Davis-Monthan Air Base. Arizona Historical Society–Tucson collections, MS1255, Charles and Lucile Herbert–Western Ways Features Manuscript and Photographic Collection, Box 35, Folder 535.

first utilized during the Second World War, removed vital industries "from the country's borders and seacoasts . . . [and scattered them inland] to avoid creation of concentrated objectives for enemy bombers."[53] In 1951, the Truman administration established a limited dispersion program intended to safeguard industrial facilities from nuclear attack. Focused on the location of future industry, rather than the existing production base, the policy mandated that new defense plants be "at least ten miles from other potential targets."[54] With the surprise Soviet detonation of a thermonuclear,

[53] William Glenn Cunningham, *The Aircraft Industry: A Study in Industrial Location* (Los Angeles, 1951), 85, 116–20, 124–25, 195; and Gilbert S. Guinn, "A Different Frontier: Aviation, the Army Air Forces, and the Evolution of the Sunshine Belt," *Aerospace Historian* 29 (March 1982): 43. See also William Glenn Cunningham, "Postwar Developments and the Location of the Aircraft Industry in 1950," in *The History of the American Aircraft Industry: An Anthology*, ed. G. R. Simonson (Cambridge, Mass., 1968), 182–207.

[54] Clifford A. Morrison and Martin J. Miller Jr., "History of Air Industrial Preparedness Planning, 1916–1950," June 1953, p. 107, call number K201-73, Iris Reference K2018, AFHRA.

or hydrogen, bomb in August 1953, regional dispersion of key industrial manufacturing facilities was again urged by military planners. Major General Grandison Gardner, director of the Joint Air Defense Board for the Department of the Air Force, argued that "inland cities not adjacent to bodies of water and over 2,500 miles from possible originating points are . . . [the] least vulnerable."[55] Hanson W. Baldwin, military editor of the *New York Times*, wrote that "dispersion is, without any question, the answer . . . for our cities to this new Hydrogen age."[56] Harold E. Talbott, who served as the secretary of the air force between February 1953 and August 1955, became a particularly enthusiastic supporter of dispersion. In April 1955, Talbott ordered via military directive, "the dispersal of future airplane and guided missile factories inland . . . [and] away from the West and East Coasts."[57]

In Arizona, dispersion soon emerged as a unique competitive advantage as both small and large communities attracted relocating defense firms. In 1957, officials at the Arizona Air Procurement District (AAPD), a liaison office of the Department of the Air Force, reported that "between 1948 and 1956" more than two hundred "new companies moved into or were activated in Phoenix alone." "This is the general trend," AAPD officials declared, "throughout the state." [58] Electronic manufacturing firms, supported by military R&D contracts, prospered in Arizona. In 1958, the state's electronics industry employed 4,800 and had $52 million in sales. Three years later, in 1961, employment had increased to 11,400 and factory sales had more than tripled to $170 million. By the end of the decade, Arizona's electronic manufacturers employed 32,500 and booked an astonishing $620 million in factory sales. One study, by the First National Bank of Arizona, noted that "Arizona exports . . .

[55] "A-Bomb Attack Not As Dangerous As Believed, Says General Gardner," June 8, 1954, p. 3, call number 168.7016-7, roll number 32068, AFHRA. See also "Gardner, Grandison," in *Who Was Who in American History—The Military* (Chicago, 1975), 195.

[56] Hanson W. Baldwin to J. Earl Schaefer, April 5, 1954, Gen Gardner's Personal Correspondence, Jan–July 1954, call number 168.7016-7, roll number 32068, AFHRA.

[57] George M. Watson Jr., *The Office of the Secretary of the Air Force, 1947–1965* (Washington, D.C., 1993), 140–44, 275; and R. H. Bennett to Carl Hayden, May 25, 1955, Folder 11, Box 175, Hayden Papers.

[58] Carl Hayden to Wallace F. Bennett, May 1, 1956, Folder 11, Box 175, Hayden Papers; Tom McKnight, "Manufacturing in Arizona," *University of California Publications in Geography* 8 (June 1962): 312; and "History #7, History of Arizona Air Procurement District, San Bernardino Air Material Area, Tucson, Arizona," July 1, 1957–December 31, 1957, p. 26, call number K204.602, roll number 14620, Iris Reference K2070, AFHRA.

increased 100 percent between 1960–66 boosted largely by . . . electronics equipment."[59] Arizona's postwar economy also benefited from prime contract awards from the DOD and, after 1958, expenditures from NASA. Between 1954 and 1964, the state received on average of $178 million per year in defense contracts. Indeed, in 1959, 1961, and 1963, Arizona received 1.1 percent of all DOD expenditures. NASA contracts, although not as substantial, brought an additional $26 million to the state between 1960 and 1965. Arizona had transformed into a vital center of defense production.[60]

Throughout the Cold War, Arizona endeavored to make itself attractive to the defense establishment. To this end, political and economic elites were extremely conscious of creating an inviting and friendly business climate in the state. Electronics and aerospace firms were especially courted. Valued as clean industries, without the "smokestacks and tenements" found in the industrial East, defense contractors could supplement Arizona's traditional economic engines—copper extraction, cattle grazing, cotton farming, and tourism.[61] As early as December 1942, state officials, in

[59] "Duncan New WCEMA President," *Western Electronic News*, February 1958, p. 9; "The West Paces U.S. Electronics Growth," *Western Electronic News*, June 1962, pp. 16–18; "West's Sales to Rise $300 Million," *Western Electronic News*, May 1963, p. 23; "Growth Restraints Continue," *Western Electronic News*, April 1969, p. 10; and "The West and the World," *Western Electronic News*, May 1967, p. 12. In 1960, AAPD officials reported that "the total value of products manufactured in . . . Arizona during the Calendar Year of 1959 was $550 million, an estimated 64% of which was Military." See "History #12, History of Arizona Air Procurement District, San Bernardino Air Material Area, Phoenix, Arizona," January 1, 1960–June 30, 1960, p. 2, call number K204.602, roll number 14620, Iris Reference K2070, AFHRA.

[60] "Department of Defense, Prime Contract Awards in Arizona By Fiscal Year," circa 1964, Folder 5, Box 742, Hayden Papers; "Military Prime Contracts of $10,000 or More in Arizona," circa 1964, Folder 5, Box 742, Hayden Papers; "Who is Getting Government's Research Billions," *U.S. News & World Report*, August 20, 1962, pp. 62–63; David A. Tansik and R. Bruce Billings, "Current Impact of Military-Industrial Spending in Arizona," *Arizona Review* 20 (Aug.-Sept. 1971): 11–20; David A. Tansik and R. Bruce Billings, "The Rise of Military-Industrial Spending in Arizona: 1970–1972," *Arizona Review* 22 (June-July 1973): 1–9; and "Expenditures of National Aeronautics and Space Administration in Arizona, 1960 to Date," circa 1965, Folder 5, Box 742, Hayden Papers. Readers should also consult Walter Isard and James Ganschow, *Awards of Prime Military Contracts by County, State, and Metropolitan Area of the United States, Fiscal Year 1960* (Philadelphia, Pa., 1960); and Walter Isard and Gerald J. Karaska, *Unclassified Defense Contracts: Awards by County, State, and Metropolitan Area of the United States Fiscal Year 1962* (Philadelphia, Pa., 1962).

[61] Robert S. Rosefsky, "Phoenix and the Space Age," *Phoenix Magazine*, July 1969, p. 28; and Royal Alderman, "Phoenix Revisited: The Electronics Boom Keeps Booming," *Western Electronic News*, June 1959, p. 18. See also Bradford Luckingham, *The Urban Southwest: A Profile History of Albuquerque, El Paso, Phoenix, and Tucson* (El Paso, Tex., 1982), 80; Earl Pomeroy, *The Pacific Slope: A History of California, Oregon, Washington, Idaho, Utah, and Nevada* (Seattle, 1965), 370–71; Elizabeth Tandy Shermer, *Sunbelt Capitalism: Phoenix and the Transformation of American Politics* (Philadelphia, Pa., 2013), 227–58; and Philip VanderMeer, *Desert Visions and the Making of Phoenix, 1860–2009* (Albuquerque, 2010), 153–64.

association with the National Resources Planning Board, began preparing for Arizona's postwar industrial development.[62] In April 1945, just prior to V-E Day, H. A. Leggett of the Maricopa County Committee for Economic Development announced that "there is danger that the businessmen of Phoenix and Arizona will set their sights too low in making postwar plans."[63] The reality of postwar retrenchment, however, meant that Arizona's wartime defense firms, Goodyear Aircraft Corporation in Litchfield Park; AiResearch Manufacturing Company of Arizona in Phoenix; and Consolidated-Vultee Aircraft Corporation, Douglas Aircraft Company, and Grand Central Aircraft Company in Tucson, experienced closures and downsizing during the late 1940s. Indeed, at decade's end, the state faced a severe reduction in its manufacturing base.[64]

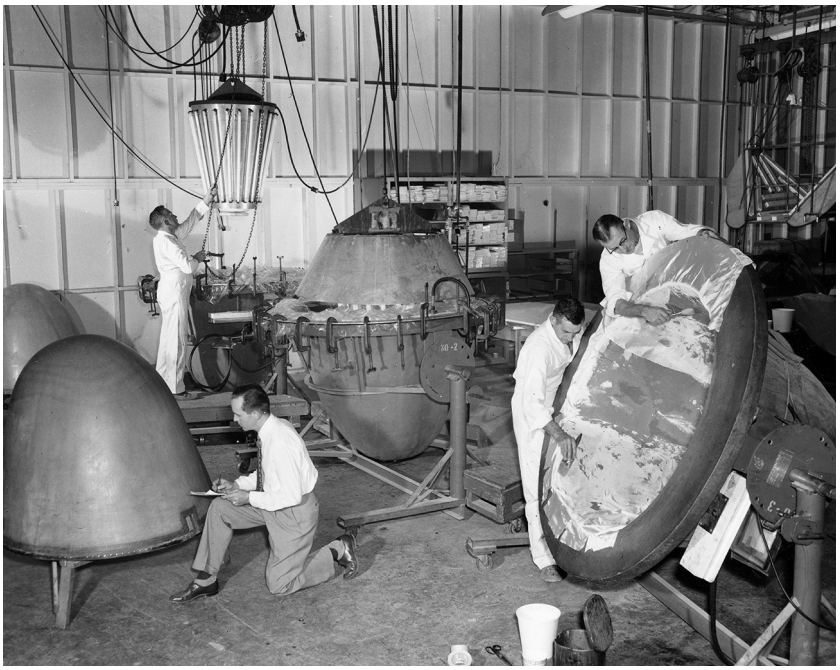
At the same time, Arizona boosters soon found themselves in direct competition with a host of other regions. At the forefront was California's San Francisco peninsula. Stanford Industrial Park, created by Frederick E. Terman of Stanford University, transformed Palo Alto and the surrounding suburban area into "the world's foremost research and development center."[65] Between 1951 and 1963, more than fifty-three electronics and engineering firms located on the peninsula, including such notables as Eastman Kodak, Fairchild Semiconductor, General Electric, Hewlett-Packard, Lockheed Aircraft Corporation, and Shockley Semiconductor Laboratory. Elsewhere in California, the cities of Los Angeles, Santa Barbara, and San Diego were also attracting electronics and aerospace firms. In the Pacific Northwest, Portland, Oregon, and Seattle, Washington, emerged as energetic challengers for defense dollars. Between 1959 and 1964, thirty-three electronics firms were established, raising the regional total to seventy. Finally, Arizona also had strong rivals in the Southwest. Albuquerque, New Mexico, and Austin, Dallas,

[62] Van Beuren Stanbery, *Pacific Southwest Region Industrial Development* (Washington, D.C., 1942), 1, 48–49, 55–56.

[63] "Sees Rapid Postwar Growth in Cards for City and State," *Phoenix Evening Gazette*, April 23, 1945.

[64] Dennis Preisler, "Phoenix, Arizona During the 1940s: A Decade of Change" (master's thesis, Arizona State University, 1992), 70–71; and McKnight, "Manufacturing in Arizona," 295, 300.

[65] Leo G. Sands, "The Peninsula Story: Electronics Industry Brings National Spotlight and Business Boom to Area," *Western Electronic News*, June 1956, p. 5; and John M. Findlay, *Magic Lands: Western Cityscapes and American Culture after 1940* (Berkeley, Calif., 1992), 121–23. See also Arthur L. Norberg, "The Origins of the Electronics Industry on the Pacific Coast," *Proceedings of the IEEE* 64 (September 1976): 1314–22.



Workers molding bomber blisters at the Goodyear Aircraft Corporation's Litchfield Park facility. Arizona Historical Society–Tucson collections, MS1255, Charles and Lucile Herbert–Western Ways Features Manuscript and Photographic Collection, Box 28, Folder 420.

and Houston, Texas, became persuasive competitors for defense-related electronics and aerospace companies. As one Texan booster declared, the "footloose quality of the industry enables manufacturers to evaluate all sections of the country and then locate their operations anywhere that conditions are most advantageous."[66]

[66] Robert S. Bell, "Outlook for Electronics in California Continues Bright," *Western Electronic News*, February 1958, 28–30; Leo G. Sands, "Electronic 'Boomlet' at Santa Barbara Now a Boom," *Western Electronic News*, June 1958, pp. 9–11; Francis J. Hoyne, "San Diego County Electronics Growth Keeps A Steady Pace," *Western Electronic News*, April 1957, pp. 10–17; Leonard Larson, "Oregon's Growth Potential Is in Field of Electronics," *Western Electronic News*, January 1958, pp. 10–13; "Electronics in Washington Centered in Seattle Area," *Western Electronic News*, January 1958, pp. 5–9; "Electronics in the Northwest," *Western Electronic News*, March 1964, p. 18; Blythe McCollum, "Albuquerque-The Focal Point of Electronics in New Mexico," *Western Electronic News*, May 1956, pp. 6–13; Donald Joyce Thompson, "Electronics in the Lone Star State," *Western Electronic News*, February 1960, pp. 18–32; Ward Robertson, "Austin's Electronics Industry: A Strong Support Team to Work With New Plants and Laboratories," *Analog* 2 (February 1959): 29–33; and Donald

Within this environment, Arizona utilized an array of political and economic incentives to attract the defense establishment. In Phoenix, the bipartisan Charter Government Committee (CGC), established in 1949 to confront corruption in municipal government, quickly evolved into one of the leading voices of industrial growth. At the urging of the CGC candidates, Phoenix voters passed several bond issues for the expansion and improvement of Sky Harbor Airport during the 1950s. The airport, which in 1959 was the "fourth busiest in the nation," allowed Arizona-based manufacturers to ship products nationwide and offered a distinct competitive advantage.[67] The CGC also supported an ambitious annexation program for Phoenix. Between 1950 and 1965, the city increased in size by 227 square miles.[68] Valley developers were quick to proclaim that Phoenix offered "industrial elbow room."[69] The Phoenix Chamber of Commerce touted the city as the "profit center of the Southwest."[70]Arizona's financial community also played an important role in attracting defense contractors. For example, Valley National Bank of Arizona, led by Walter R. Bimson and Carl Bimson, obtained national security clearances for several bankers.[71] This

Joyce Thompson, "Electronics in the Lone Star State," *Western Electronic News*, February 1960, p. 22.

[67] Michael F. Konig, "Toward Metropolis Status: Charter Government and the Rise of Phoenix, Arizona, 1945–1960" (PhD dissertation, Arizona State University, 1983), 197–216, 238–46; Bradford Luckingham, *Phoenix: The History of a Southwestern Metropolis* (Tucson, 1989), 148–53, 156–58; Neil Morgan, *Westward Tilt: The American West Today* (New York, 1961), 348; and Royal Alderman, "Phoenix Revisited: The Electronics Boom Keeps Booming," *Western Electronic News*, June 1959, p. 18. The Sky Club Restaurant, located at Sky Harbor Airport, became a well-known gathering place for business elites. During the 1950s, the restaurant was decorated with futuristic murals depicting space travel and the solar system. See "Sky Club Restaurant T-1 1950s," Images 1950s, Archive VIII, Historical Photos and Material, Sky Harbor Art Program, Aviation Department, Phoenix Sky Harbor International Airport, Phoenix, Arizona.

[68] Konig, "Toward Metropolis Status," 82–85, 96–105; Michael Konig, "Phoenix in the 1950s: Urban Growth in the 'Sunbelt,'" *Arizona and the West* 24 (Spring 1982): 32–33; John D. Wenum, *Annexation as a Technique for Metropolitan Growth: The Case of Phoenix, Arizona* (Tempe, Ariz., 1970), 62.

[69] Quote from Arizona Public Service advertisement in *Western Electronic News*, January 1956, p. 44. See also Gerald Marvin Hermanson, "Urbanization of Agricultural Lands in Maricopa County, Arizona, 1950–1980" (master's thesis, Arizona State University, 1968), 68–73.

[70] Quote from Phoenix Chamber of Commerce advertisement in *Western Electronic News*, November 1969, p. 4.

[71] Charles M. Swaart, "The Valley in Space," *Phoenix Point West Magazine*, September 1964, p. 25. In June 1957, Valley National Bank also funded an observation station on the roof of its downtown Phoenix offices. The bank hoped to become among the first to track the orbit of artificial satellites being planned by both the Soviet Union and the United States as part of the International Geophysical Year. See "High in the Sky in Downtown Phoenix,"

allowed local electronics and aerospace executives to speak candidly when seeking investment capital for R&D projects and plant expansions. Arizona also benefited from a maturing educational system. The two major institutions in the state, the University of Arizona (U of A) in Tucson and Arizona State College at Tempe, later Arizona State University, expanded rapidly during the 1950s and 1960s. In 1960, Gerald P. Kuiper, a leading authority on lunar and planetary studies, relocated to U of A from the University of Chicago. With Kuiper came international acclaim and important NASA and National Science Foundation research grants.[72]

It was, however, Arizona's stance on labor and taxation that most appealed to the defense establishment. In November 1946, Arizonans voted, by a 61,875 to 49,557 margin, to amend the state constitution to prohibit "compulsory union membership."[73] Known as the right-to-work law, the initiative and its later enabling acts substantially weakened Arizona's labor unions by creating an open shop (i.e., employers could hire union or non-union employees). For the electronics and aerospace industries, right-to-work legislation allowed for lower wages and brought an end to organized work stoppages and strikes. Like labor, Arizona's tax structure also became an important issue for defense contractors. During the early 1950s, business and civic leaders initiated a massive overhaul of the tax system to help attract electronics and aerospace companies. As part of the effort, the state legislature eliminated taxes on manufacturing inventories, lowered assessment rates for machinery and equipment, and provided tax exemptions for warehoused goods. When Sperry Rand Corporation expressed misgivings about Arizona's "sales tax on sales to the federal government" in December 1955, the legislature quickly intervened to repeal the law.[74] Indeed,

Western Electronic News, June 1957, p. 16.

[72] Lisa Friel and L. Kay Walker, "Politics and Public Education in Arizona," in *Politics and Public Policy in Arizona*, ed. Zachary A. Smith (Westport, Conn., 1996), 91–92; Ernest J. Hopkins and Alfred Thomas Jr., *The Arizona State University Story* (Phoenix, 1960), 154–56, 284; George E. Webb, *Science in the American Southwest: A Topical History* (Tucson, 2002), 188–89; Carle Hodge, "New Frontiers in Science: The University of Arizona," *Arizona Highways*, March 1965, pp. 39, 42–43; and "Research Grants to U of A," *Western Electronic News*, December 1964, p. 15.

[73] Clifford Sturges Newell, "The Right to Work Law in Arizona" (master's thesis, Arizona State University, 1977), 28–43, 59, 115, 126–27; "Force or Freedom? The Debate Over Repeal of 14(b)," circa 1966, pp. 1–5, Folder 11, Box 344, Hayden Papers; and Gilbert J. Gall, *The Politics of Right to Work: The Labor Federations as Special Interests, 1943–1979* (New York, 1988), 26–27, 43–45, 137.

[74] McKnight, "Manufacturing in Arizona," 313; Luckingham, *The Urban Southwest*, 83; and

retired General Douglas MacArthur, who served as chairman of the board of Sperry Rand, later described booster efforts as "mutually beneficial to both the city and the company."[75]

The defense establishment also brought subtle and often unforeseen changes to Arizona's postwar society. During the 1950s and 1960s, the state emerged as a prominent stronghold of anti-communism and, later, ultraconservatism. Indeed, Arizona, which had consistently voted Democratic during the first half of the twentieth century, transformed after 1952 into a significant Republican majority.[76] Military officials and newly settled defense contractors were important agents in this political reversal. A well-respected and influential class, Arizona's defense establishment became persistent critics of international communism. Publicity material prepared by military officials for Phoenix's 1963 Navy Day celebration warned that "Moscow and/or Peking . . . [were involved in] exploitation and subversion" across the Southern hemisphere.[77] At Davis-Monthan AFB in Tucson, officers and airmen of the 43rd Bombardment Wing attended lectures on "the political influence which Communism has made in the various sectors of Africa."[78] Arizona electronics and aerospace firms also became outspoken opponents of communism. For example, Sperry Phoenix Company (a division of Sperry Rand), which located in Deer Valley, Arizona, in 1956, was particularly well known for its conservative agenda.[79]

"Bob Roe Celebrates 30 Years With Sperry Rand," *Sphere* 3 (July 1969): 8–9

[75] Guy Stillman to Roy Elson, undated, Folder 11, Box 344, Hayden Papers; Thomas E. Sheridan, *Arizona: A History* (Tucson, 1995), 275–78; Tom Barnhart, "Electronics 'Sparks' Booming Industrial Growth of Phoenix," *Western Electronic News*, January 1956, pp. 7–8; Royal Alderman, "Phoenix Revisited: The Electronics Boom Keeps Booming," *Western Electronic News*, June 1959, pp. 18–19; "Industry Views: Phoenix and the Valley of the Sun," circa 1964, p. 2, FE EPH WI-55, Arizona Historical Foundation, Hayden Library, ASU; Gerald Whitney Stone Jr., "A Study of Business Tax Burdens in the Southwest" (master's thesis, Arizona State University, 1969), 56–58; "Sperry-City Pact Hailed By M'Arthur," *Phoenix Gazette*, February 20,1956; and "In Memoriam: General Douglas MacArthur, 1880–1964," *Sperry Spectator* 5 (May 1964): 2.

[76] Pia Montoya, comp., *Arizona Statistical Abstract 1993: Data Handbook* (Tucson, 1993), 256–57; and Robert Kryger, "The 1960 Presidential Election: Los Angeles, Phoenix, and Las Vegas," *Nevada Historical Society Quarterly* 39 (Summer 1996): 122–26.

[77] "The Meaning of Navy Day 1963," 1963, Litchfield Park NASAH.

[78] "History of the 36th Air Division and the 803d Air Base Group, Davis-Monthan Air Force Base, Tucson, Arizona," April 1954, p. 3, call number K-DIV-36-HI, roll number 11317, Iris Reference P0556, AFHRA.

[79] Harry Weisberger, "Silver: Sperry Marks 25 Years, Much Growth in Phoenix," *Sperry Star* 12 (July–August 1982): 4–5; Breswick and Gayle, *Memorandum Report*; "An Industrial Profile: Sperry Phoenix Company," undated, Folder 47, Box 326, Hayden Papers; and Casper W. Weinberger, "Welfare State Threatens Personal Liberties, Promises Economic

Cocooned B-29s at Davis-Monthan Air Base. Arizona Historical Society–Tucson collections, MS1255, Charles and Lucile Herbert–Western Ways Features Manuscript and Photographic Collection, Box 35, Folder 536.

As late as 1977, the company provided financial backing for a television documentary on "modern Euro-Communism" that contended that Moscow was "using the electoral process to seek control in several Western European countries."[80]

Some Arizonans became part of the government's "informer network."[81] Phyllis Orpha Stevenson of Phoenix served as a paid informant for the Federal Bureau of Investigation (FBI) between April 1947 and December 1948.[82] An itinerant auto upholsterer,

Ruin," *Sperry Star* 5 (August 1975): 3.

[80] "Sperry Rand to Sponsor Documentary with Kissinger on Eurocommunism," *Sperry Star* 7 (December 1977): 2.

[81] David Caute, *The Great Fear: The Anti-Communist Purge Under Truman and Eisenhower* (New York, 1978), 114–21.

[82] "Subject: Phyllis Orpha Stevenson," FOIPA No. 0955095-001, Freedom of Information/Privacy Acts Release, Federal Bureau of Investigation, U.S. Department of Justice, Washington, D.C. and "Case # 27236 US v. Forest, et al.," March 17, 1954, p. 3544, Volume 6, Criminal Case Files 1864-1966, US District Court—St. Louis MO, RG 21, Central Plains

Worker de-cocooning an airplane. Arizona Historical Society–Tucson collections, MS1255, Charles and Lucile Herbert–Western Ways Features Manuscript and Photographic Collection, Box 35, Folder 536.

Stevenson infiltrated the West Phoenix Club (later the Mike Quinn Club), a group linked to the Communist Party of the United States of America.[83] Serving as chairperson and literature director, Stevenson provided the FBI with detailed reports on Arizona "Communist matters."[84] When five Missouri communist leaders were indicted in September 1952 for violations of the Alien Registration Act, or the Smith Act, a law that criminalized membership in subversive organizations, Stevenson served as a government witness in the ensuing trial.[85] Specifically, Stevenson testified that one of the defendants, James F. Forest, had organized a two-day course on Leninism in downtown Phoenix in October 1947.[86] When the trial concluded in May 1954, all five communist leaders were found guilty and sentenced to prison.[87] Stevenson later described her efforts "as a job any American should be willing to do."[88]

During the 1960s, Arizona continued its move to the right. Ultraconservatism, which combined traditional anticommunist rhetoric with fresh acrimony toward civil rights legislation, welfare programs, organized labor, and taxation, was particularly well received in the state. The John Birch Society, a right-wing extremist group founded by Robert Welch in late 1958 to combat liberalism, attracted

Region, National Archives and Records Administration, Kansas City, Missouri (hereinafter NARA-KC). See also "Subject: Earl W. Stevenson," FOIPA No. 0955094, Freedom of Information/Privacy Acts Release, Federal Bureau of Investigation, U.S. Department of Justice, Washington, D.C.

[83] Roger Lewis, "Two Phoenix Counterspies Glad Cloak, Dagger Work About Over," *Arizona Republic*, March 21, 1954.

[84] "Subject: Phyllis Orpha Stevenson," FOIPA No. 0955095-001, Freedom of Information/Privacy Acts Release, Federal Bureau of Investigation, U.S. Department of Justice, Washington, D.C. and "Case # 27236 US v. Forest, et al.," March 17, 1954, pp. 3527–32, NARA-KC.

[85] Jay Walz, "F.B.I. Seizes 18 More Reds as Conspirers Against U.S.," *New York Times*, September 18, 1952; "12 More Indicted As Red Plotters," *New York Times*, September 25, 1952. See also Ronald Wayne Johnson, "The Communist Issue in Missouri: 1946–1956" (PhD dissertation, University of Missouri, 1973), 146–48, 155–62; Michal R. Belknap, *Cold War Political Justice: The Smith Act, the Communist Party, and American Civil Liberties* (Westport, Conn., 1977), 154; Caute, *Great Fear*, 203, 585n25; and *Digest of the Public Record of Communism in the United States* (1955; repr., New York, 1977), 194–205. Information on the federal trial can also be found in the Frank P. O'Hare Papers located at the Missouri Historical Society in St. Louis, Missouri.

[86] "Case # 27236 US v. Forest, et al.," March 17, 1954, pp. 3533–35, NARA-KC; Lewis, "Two Phoenix Counterspies Glad Cloak, Dagger Work About Over" and "Woman Witness Names Forest As Red Teacher," March 19, 1954, p. 73, Politics in Missouri, Volume 13, Missouri Historical Society, St. Louis, Missouri.

[87] "5 Reds Found Guilty in Conspiracy Case," *New York Times*, May 29, 1954; "5 Missouri Reds Get 3 to 5 Years in Jail," *New York Times*, June 5, 1954.

[88] Lewis, "Two Phoenix Counterspies Glad Cloak, Dagger Work About Over."

a host of Arizona elites, including Frank Cullen Brophy, a well-known Phoenix banker, and Martin T. Phelps, the former chief justice of the Arizona Supreme Court.[89] It was, however, the Kennedy administration that aroused the greatest disdain among the Arizona defense establishment. Donald C. Dickson of Dickson Electronics Corporation in Scottsdale, Arizona, believed that President Kennedy "bungle[d] along from one event to another as dictated by fate and our enemies."[90] Retired Major General Grandison Gardner, living in Phoenix, bemoaned "the ruthless rule of the unprincipled, arrogant, weak minded, cowardly Kennedy family."[91] For these individuals, only ultraconservatives could meet America's Cold War challenges.

At the same time, the defense establishment was not always warmly welcomed in Arizona. Throughout the 1950s and 1960s, as military rearmament and mobilization efforts expanded, Pentagon strategists and local residents often clashed. One persistent criticism was noise from military aircraft. Writing to Senator Hayden in May 1959, one constituent protested that "daily, sometimes oftener, airplanes break the sonic barrier over Phoenix. The result each time is like a super-charge of TNT exploding next door." Worried about "inestimable" damages to his property, he requested that the senator "do something to restrain these 'speed-happy' airmen."[92] Residents in Tucson raised many of the same grievances. When the 303rd Bombardment Wing, stationed at Davis-Monthan AFB, converted from propeller-driven aircraft to gas-turbine, or jet engine, aircraft in 1953, several citizens "complained, through the newspapers, of the noise."[93] In Douglas, Arizona, members of the National

[89] Mary C. Brennan, *Turning Right in the Sixties: The Conservative Capture of the GOP* (Chapel Hill, N.C., 1995), 18; Benjamin R. Epstein and Arnold Forster, *The Radical Right: Report on the John Birch Society and Its Allies* (New York, 1967), 21–23; Michael P. Malone and Richard W. Etulain, *The American West: A Twentieth-Century History* (Lincoln, Neb., 1989), 275; Robert A. Goldberg, *Grassroots Resistance: Social Movements in Twentieth Century America* (Belmont, Calif., 1991), 120–30; Eckard Vance Toy Jr., "Ideology and Conflict in American Ultraconservatism, 1945–1960" (PhD dissertation, University of Oregon, 1965), 231–38; and J. Allen Broyles, *The John Birch Society: Anatomy of a Protest* (Boston, 1964), 48–50, 52–54, 59–61. The best known ultraconservative tract is Barry Goldwater's *Conscience of a Conservative* (Shepherdsville, Ky., 1960).

[90] D. C. Dickson, "Politics, Price and Reliability," *Western Electronic News*, September 1963, p. 22.

[91] Grandison Gardner to Barry Goldwater, October 17, 1962, Letters Various and Sundry, Feb. 8, 1952–June 30, 1967, call number 168.7016-7, roll number 32068, AFHRA.

[92] Joe Wilson to Carl Hayden, May 11, 1959, Folder 20, Box 562, Hayden Papers.

[93] "History of the 36th Air Division and the 803d Air Base Group, Davis-Monthan Air Force Base, Tucson, Arizona," December 1953, p. 5, call number K-DIV-36-HI, roll number 11317, Iris Reference P0556, AFHRA. Arizonans also expressed concern about the

Woman's Christian Temperance Union accused U.S. Air Force pilots of bootlegging. The organization complained that military aircraft landed at the Bisbee-Douglas International Airport and airmen then traveled to the border town of Agua Prieta, Mexico, to buy alcoholic beverages for consumption and resale.[94]

Other Arizonans disapproved of the large military maneuvers that were intermittently held throughout the state. For example, in late May 1964, the Headquarters United States Strike Command of the Department of the Army initiated Desert Strike, a training exercise for the U.S. Army and the U.S. Air Force. The joint maneuver, designed to assess troop mobility and flexibility on unfamiliar terrain, utilized public and private land in Arizona, California, and Nevada. Western cattle ranchers, who traditionally had an ambivalent relationship with the federal government, were particularly enraged. Elmer C. Coker, a Phoenix attorney who represented Jack Clem of Chandler, Arizona, noted that "the Department of Defense seeks to use . . . patented lands . . . [at the very time] when the maximum number of livestock graze."[95]

Citizens also looked unkindly at defense measures that appeared to endanger the population. For example, several Tucson residents became embroiled in a contentious debate with Department of the Air Force officials in May 1960 after Davis-Monthan AFB was selected as a support headquarters for a Titan (later Titan II) missile complex. Deployed in reinforced underground silos, the Titan was designed to provide a second-strike ICBM capability in the event of nuclear war. Anxiety arose, however, when Tucson residents learned that the missile sites were to be located within fifty miles of "the Tucson Urban Area."[96] A grassroots protest movement, the Committee

environmental consequences of military installations, specifically air pollution caused by jet engine exhausts. See "Analysis of Problems of Air Pollution Resulting from Air Base Operations," undated, Folder 23, Box 303, Hayden Papers.

[94] Mrs. Glenn G. Hays to Carl Hayden, March 15, 1961, Folder 1, Box 401, Hayden Papers; Harold P. Sparks to Carl Hayden, April 10, 1961, Folder 1, Box 401, Hayden Papers.

[95] E. J. Withers to Carl Hayden, January 31, 1964, Folder 10, Box 306, Hayden Papers; "Information for Members of Congress," November 8, 1963, Folder 10, Box 306, Hayden Papers; Earl G. Peacock to Jack and Gertha Clem, December 10, 1963, Folder 10, Box 306, Hayden Papers; Elmer C. Coker to Earl G. Peacock, December 27, 1963, Folder 10, Box 306, Hayden Papers.

[96] Joseph T. Kingsley Jr. to Carl Hayden, April 19, 1960, Folder 21, Box 401, Hayden Papers; James E. McDonald, "An Analysis of Civil Defense Hazards Being Created by Emplacement of Intercontinental Ballistic Missiles Near Tucson," *Journal of the Arizona Academy of Science* 2 (August 1961): 3–5; Edmund Beard, *Developing the ICBM: A Study in*

Against Ringing Tucson with Titans, soon organized. Led by Dr. James E. McDonald, a physicist at the University of Arizona, the group argued that the Titan missiles should be relocated downwind (i.e., east) of the city to lessen the chance of atomic fallout reaching Tucson should a nuclear exchange occur. Support for the movement quickly faded, however, when defense officials warned Arizona's congressional delegation that Davis-Monthan AFB would be deactivated if "responsible citizens of Tucson" continued to show a "lack of enthusiastic response."[97] Even Arizona boosters became disillusioned with the defense establishment on rare occasions. When rumors circulated that the Boeing Company might locate a guided missile facility in Yuma, the *Yuma Daily Sun* was unimpressed. Indeed, the newspaper chastised the local population for "trembling like an anxious bride . . . and threaten[ing] to send a quivering real estate market into fits."[98]

The desire of some Arizonans for postwar industrial growth often bordered on the comical. In 1952, Ed Goyette of the Chamber of Commerce in Tucson tried unsuccessfully to attract "a germ warfare plant" to the state.[99] Senator Roy L. Elson, learning that Bell Aerosystems Company of Buffalo, New York, was looking for "an isolated site of 7,000 acres" for an engine testing facility, worked tirelessly to entice the firm to Arizona.[100] The fact that Bell Aerosystems would be utilizing "highly toxic" propellants in its experiments was inconsequential to his lobbying activities.[101] The most somber illustration of Arizonan disaffection with the defense establishment, however, occurred on December 9, 1963. During routine inspection of several aircraft at Williams AFB, sixty-eight "T-38 supersonic

Bureaucratic Politics (New York, 1976), 210–11, 213; Andre M. Faure to Carl Hayden, May 2, 1960, Folder 21, Box 401, Hayden Papers.

[97] James E. McDonald, "Cities into Targets: Our Misplaced Missile Bases," *Nation*, May 21, 1960, p. 438; "Council Hears Titan Dispute," *Arizona Daily Star* (Tucson), May 17, 1960; "Atomic Fallout Dangers Discussed Before Council," *Tucson Daily Citizen*, May 17, 1960; Thomas Muscraft to Carl Hayden, May 23, 1960, Folder 21, Box 401, Hayden Papers; "Council Assures Air Force Tucson Wants Titans, Won't Question Sites," *Tucson Daily Citizen*, May 24, 1960.

[98] "Straight From Horse's Mouth: 'Yuma Much Too Small for Boeing,'" *Yuma Daily Sun*, July 25, 1955.

[99] Carl T. Hayden to Ed Goyette, October 6, 1952, Folder 33, Box 93, Hayden Papers.

[100] Roy L. Elson to Ed Davis, March 11, 1965, Folder 25, Box 328, Hayden Papers; Roy Albertson to Roy Elson, January 15, 1965, Folder 25, Box 328, Hayden Papers.

[101] Roy L. Elson to Ed Davis, March 11, 1965, Folder 25, Box 328, Hayden Papers.

jet trainers" were discovered with sabotaged landing gear.[102] Although both the FBI and the Department of the Air Force conducted a thorough investigation, those responsible were never apprehended.

Arizona played a crucial role during the opening decades of the Cold War. Between 1945 and 1968, the state emerged as a strategic center of defense production. Arizona developed a unique postwar defense establishment that over time influenced a range of economic, social, and political events within the state. With its isolated setting and uncluttered air waves, Arizona became home to numerous military installations, research laboratories, and test facilities including the U.S. Army's electronic proving ground. Arizona defense installations also served as important MDAP and MSP refurbishment and modification centers, and the state became home to a clandestine staging ground and embarkation point for the CIA. Defense policies such as industrial dispersion offered Arizona a distinct competitive advantage and brought hundreds of electronics and aerospace firms to Arizona during the 1950s and 1960s. Arizona boosters became adept at making the state attractive to defense contractors. Through pro-business labor and taxation policies, Arizona continued to attract new manufacturing facilities. However, caution was also needed. Arizona was now part of a high-stakes contest for defense dollars, which placed it in direct competition with several other emerging Cold War high-technology centers. Deep-rooted antagonism toward communism and liberalism by both military officials and defense contractors altered the political landscape. By the late 1960s, Arizona was an influential Republican stronghold. Some Arizonans, however, were troubled by the growth of the defense establishment. Arizona discontent, typically focused on environmental and health concerns, was occasionally expressed through complaints and protest. Despite such concerns, the early Cold War was a transformative period for Arizona, and the defense establishment contributed to far-reaching changes to Arizona's society.

[102] Louis B. Cole to AFXOPX, December 9, 1963, ND 7-1 Sabotage-Espionage, Container 68, Confidential File, WHCF, LBJ Library; William E. Odom to Mr. Kilduff, December 9, 1963, Ex Pu 1/FG 130, Container 6, Subject File, WHCF, LBJ Library.