Casting Off the Shadow: Tactical Air Command from Air Force Independence to the
Vietnam War

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Casting Off the Shadow: Tactical Air Command from Air Force Independence to the
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ABSTRACT

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Casting Off the Shadow: Tactical Air Command from Air Force Independence to the Vietnam War

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The American military fully realized a third dimension of warfare in World War II that sparked a post-war discussion on the development and employment of air power. Officers of the Army Air Forces lobbied for an independent service devoted to this third dimension and agreed on basic principles for its application. By the time the Truman administration awarded the Air Force its autonomy, the strategic bombing mission had achieved primacy among its counterparts as well as a rising position in national defense planning. Because of the emphasis on the Air Force’s Strategic Air Command, Tactical Air Command found itself in jeopardy of becoming an irrelevant organization in possession of technology and hardware that American defense planners would no longer deem necessary. In order to thwart irrelevancy Tactical Air Command underwent a modernization process to align it with national defense policy, but in the process, developed systems ill-suited to meet the challenges of limited, conventional war.
DEDICATION

To my wife, Lisa, and daughter Emma
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INTRODUCTION

By the beginning of World War II, commanders and military thinkers had shaped the basic principles for the application of air power. Air commanders largely agreed that the harmonious interaction of centrally controlled air assets, regardless of function, should dictate all other principles in directing war in the third dimension, but prioritizing those functions sparked debates. The debates ranged in scale from intraservice bickering to discussions on national defense policy and generated a bipolar world within the Air Force. Surface commanders and air commanders who worked closely together on the battlefield favored tactical air power. These commanders favored the ability of air power to maintain friendly skies over the battlefield and deliver firepower in close support of ground forces. The cooperation between surface commanders and air commanders in World War II extended to an amiable relationship in the postwar period that the Army Air Forces exploited in its pursuit of autonomy. At the opposite end, were the bomber generals, who won the favor of civilian planners by providing a means to strike at the heart of an enemy nation and destroy their war making potential.\footnote{For more on the development of strategic bombing through World War II see Tami Davis Biddle, \textit{Rhetoric and Reality in Air Warfare: The Evolution of British and American Ideas About Strategic Bombing, 1914-1945}, (Princeton: Princeton University Press, 2002).} From the end of World War II into the early 1960s, America’s strategic air arm was the centerpiece for defense planning and dominated the defense budget. Its allure in the post-World War II era prompted policy makers to call into question the relevance of the other services. Moreover, Strategic Air Command (SAC) cast a shadow over Tactical Air Command (TAC), a significant portion of its own service.
SAC commanders were willing to sacrifice their brethren if the other combat command cut into spending for strategic bombing or encroached on its dominance of the nuclear mission, and the Air Force’s leadership was willing to permit it. The Air Force risked losing valuable institutional memory gained in World War II and the headway made in the development of ground-air tactics and doctrine. Moreover, TAC possessed the most effective air power in a limited war scenario. After the establishment of the independent Air Force, TAC found itself in a precarious position between the zealots of SAC and Army commanders who held a view of air power more akin to their own. Yet, in order to promote independence for the Air Force and secure its long-term growth, TAC’s leaders aligned with the strategic bombing enthusiasts, the one group assured to marginalize its status. Over time, however, TAC’s proponents realized its survival required forging its own path, and in the age of strategic bombing, a nuclear mission for tactical air power would bolster its standing. TAC faced the difficult and multifaceted task of obtaining a nuclear capability while promoting the indivisibility of air power for its own service, yet guaranteeing continued support of surface forces. From the establishment of an independent Air Force in 1947 to the war in Vietnam, Tactical Air Command transformed itself through a process of modifying its doctrine and modernizing equipment to take on a nuclear mission. Although SAC remained the dominant command through this time-period, it increasingly shared influence with TAC and the slow, but steady shift in focus began as early as 1950.

The period under discussion represents a pivotal time in the Air Force’s development. As a new independent service, the Air Force shaped a distinct culture apart
from its former parent service. In *Technology and the American Way of War Since 1945*, Thomas Mahnken surveys service culture and technology. Mahnken argues that the services’ cultures shaped technology more than technology shaped the services. He also notes the structure and dominant groups of each service. Within the Air Force, a “monarchical” structure exists with an influential service chief drawn from a dominant subgroup. From the time of its independence through the Vietnam War, the dominant subgroup within the Air Force was Strategic Air Command. Mahnken also examines American armed forces’ reliance on firepower and the problems adapting it to limited war.² The Air Force accepted technology more than any other service, indeed, it is part of its culture and drove doctrinal developments. Moreover, these developments had lasting effects on the Air Force with ramifications that stretch into the twenty-first century. This study largely reinforces Mahnken’s ideas concerning technology and service culture and applies them to TAC as a specific element within the Air Force. Additionally, it explores the intra-service rivalry triggered by the institutions monarchical structure. A number of studies discuss interservice competition, but few have viewed rivalry through the lens of a subgroup that was often at odds with the larger institution’s requirements and strategic vision.

A considerable body of literature exists on the development of air power during the Cold War. A number of studies explore its efficacy and decisiveness in warfare. Mark Clodfelter’s *The Limits of Air Power* discusses the strategic bombing missions

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during the Vietnam War. Clodfelter examines the Air Force’s strict adherence to World War II doctrine and the problems it created in adapting air power as a political tool. Donald Mrozek’s *Air Power and the Ground War in Vietnam* complements Clodfelter’s work with a closer study of tactical air power and its impact on the ground forces. Conrad Crane’s *American Airpower Strategy in Korea* discusses the problems the newly independent Air Force faced in its first war and shows its capabilities and limitations in the early years of the nuclear age. Additionally, Crane discusses the mounting tensions between TAC and the Army. The Army’s claims that the Air Force failed to deliver acceptable levels of close support strained the already tenuous relationship between the services and further damaged TAC’s once friendly association.

Other studies have addressed interservice and intraservice politics and rivalries. Jeffrey Barlow’s *Revolt of the Admirals* examines the competition between the Air Force and the Navy in the late 1940s. Barlow specifically looks at the Air Force’s independence as a threat to the continued growth of naval aviation and explains the arguments and tactics the Navy used to thwart the Air Force’s advances. Caroline Ziemke’s dissertation “In the Shadow of the Giant” discusses TAC’s struggle to remain a major and relevant command in the era of strategic bombing. Ziemke also argues that the Army’s reluctance to voice its concerns more forcefully over the degradation of close air support contributed

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to TAC’s move away from conventional capabilities. Finally, Colonel Mike Worden addresses intraservice rivalry by evaluating Air Force leadership in *Rise of the Fighter Generals*. Worden analyzes how the career specialty of four-star Air Force generals affected service decisions.

In addition to the works that examine the Air Force directly, a variety of histories covering service culture and the interplay of technology and doctrine among the other services has shaped this study. Ingo Trauschweizer’s *The Cold War U.S. Army* examines the Army’s evolution and adaption to the age of nuclear weapons. Trauschweizer’s institutional history concentrates on doctrine, strategy, operational planning, organizational structure, and technology as the Army transformed its role into the deterrent force against the Soviet Union in Central Europe. This study is particularly relevant due to tactical air power’s supportive role of the Army, which made TAC more sensitive than SAC to the change of the surface force’s identity. In *From Hot War to Cold: The U.S. Navy and National Security Affairs*, Jeffrey Barlow presents an institutional history of the Navy in the first decade of the Cold War. Barlow stresses the Navy’s response to America’s new position as a global power, with a primary focus at the Joint Chiefs of Staff level. In contrast to the story of the Army and the Navy is the tale of the Marines. Aaron O’Connell’s *Underdogs* delivers a cultural history of the armed service most resistant to change in the nuclear age. The Marine Corps advanced its

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history and tradition instead of making sweeping changes to doctrine or adapting high-tech equipment and in doing so; it gained support from the public. Although all of the services have a unique culture, none exploited it as effectively as the Marines did.\textsuperscript{11}

Several secondary sources have provided insight to the civilian side of defense and strategy planning as well as adding context to the geopolitical situation in the early Cold War. Marvin Leffler’s \textit{A Preponderance of Power} explains how the Truman administration wielded the superior American industrial and military power to shape its strategy of containment against the advances of Communism.\textsuperscript{12} Likewise, Saki Dockrill’s \textit{Eisenhower’s New Look National Security Policy} investigates the defense policy of the Eisenhower administration with particular attention paid to wrangling defense spending.\textsuperscript{13} Jonathan House’s \textit{A Military History of the Cold War 1944-1962} offers an account of the relationship between government policy and military preparedness and strategy in the early years of the Cold War. House argues that the increasing pursuit of military solutions for political objectives perpetuated a state of semi-mobilization.\textsuperscript{14}

In addition to these and other secondary sources, the Air Force Historical Research Agency and the Office of Air Force History have supplied a wealth of primary sources. Three personal collections are particularly insightful. The papers of General John K. Cannon and General Otto P. Weyland contain memoranda, studies, and

transcripts of lectures and congressional testimonials and briefings on the state of tactical air power and future needs. Cannon’s tenure as TAC commander (1951 to 1954) followed by Weyland (1954 to 1959) represents a key period in the development of tactical air power. The third set of personal papers, from Vice Commander of TAC in the early 1960s, General Charles Westover contains a particular strength in the Army/TAC relationship, development of the Army Air Mobility concept, and issues stemming from incompatible doctrine. These sources combined with articles from *Air Force Magazine* and *Air University Quarterly Review* provide insight into the thinking of Air Force officers from all of the major commands as well as officers from the other services.

In the course of my research several general themes have developed. The principal theme is the adoption of technology based on the fundamental principles of air power. Central to this development is the pursuit of technological solutions by TAC, largely in the form of nuclear weapons, which shifted tactical air power away from its traditional roles and functions. TAC’s leaders viewed the adoption of nuclear weapons as a method to enhance firepower and implemented a system to incorporate the new weapons with the flexibility of smaller tactical aircraft. Nevertheless, the attempts to exploit TAC’s firepower and flexibility degraded conventional capabilities. A second theme is inter-service and intra-service relationships. The nature of TAC’s mission required it to work more cooperatively with the other services branches than SAC, but the pressure to promote the indivisibility of air power and support SAC placed stress on the relationship it had fostered with the surface forces, most notably the Army. Ironically, TAC’s commanders perceived the predominant position of SAC as a threat, which leads
to a third theme. The intra-service tension between SAC and TAC resembles the
interservice rivalries between the Air Force and the other service branches. Moreover,
TAC’s pursuit of a nuclear capability echoes the Army’s struggle to adapt nuclear
weapons to remain relevant and survive in the shadow of strategic bombing and the age
of Massive Retaliation.

A fourth and final theme is the influence of TAC’s leadership in the
modernization of tactical air power. During the 1950s, TAC’s influence grew under the
strength of two commanders, General John K. Cannon and General Otto P. Weyland,
respectively. Both of these commanders gained respect among their peers and
subordinates due to their achievements in World War II. Cannon’s pursuit of a nuclear
mission for TAC and Weyland’s efforts to maintain both nuclear and conventional
capabilities left an unmistakable mark on the developments of tactical air power in this
period. Nevertheless, despite the experience and knowledge of these commanders their
decisions deserve scrutiny. By examining TAC, this study explores how a particular
subgroup within America’s armed forces reinterpreted its mission to remain relevant in a
shifting strategic environment. Although it thwarted marginalization, TAC’s dogmatic
adherence to the basic principles of airpower and reliance on firepower affected the
modernization process, damaged its relationship with the Army, and failed to address the
potential for limited war.
CHAPTER 1: TACTICAL AIR COMMAND IN CONFLICTS AT HOME AND ABROAD 1946-1953

At the end of World War II, the Truman administration turned its attention towards demobilization and restructuring America’s armed forces. The third dimension of warfare that air power offered became a dominant factor in postwar national defense planning, but complicated the president’s attempts at unification. Commanders of the Army Air Forces used their branch’s wartime contributions as evidence to claim that air power demanded a status equivalent to that enjoyed by the surface forces, an idea dating back to the interwar years. The leadership of Army Ground Forces largely concurred that an autonomous service should control and command the air as long as a new Air Force would continue to support the Army in the roles established during the war. The Navy, however, viewed the rise of the AAF and particularly its strategic air arm as a threat to the continued development of sea power and their own interests in aviation. The rivalry sparked between the Navy and the Air Force would last for decades, hindered attempts at comprehensive unification and caused frustration over the division of roles and missions in regards to air power.15

Within the Air Force, a separate debate ensued over the proper employment of air power. The officers of Tactical Air Command raised concerns over the growing influence of strategic air power in the nation’s defense planning and the consequences for their organization. AAF leadership exploited tactical air power champions to promote Air Force independence and foster goodwill with Army ground commanders, while favoring strategic bombing as its primary mission. In the half decade between World

15 For more on the Air Force/Navy rivalry see Jeffrey Barlow, Revolt of the Admirals.
War II and the Korean War, changes in Air Force leadership, interservice and intraservice rivalry, and a limited budget led to marginalization for Tactical Air Command in a time it was attempting to define itself as part of an independent service. By the end of the 1940s, the fate of tactical air power was in peril, however, the Korean War would demonstrate that the new Air Force acted too quickly in disregarding tactical air power.

In a letter to the commanding generals of the AAF on 21 March 1946, the Adjutant General’s Office of the War Department outlined the establishment of three major combat commands for the aviation component of the United States Army. The activation of Strategic Air Command (SAC), Tactical Air Command (TAC), and Air Defense Command (ADC) represented one of the postwar planning steps to allow the AAF to fulfill its mission as described in War Department Field Manual 100-20, Command and Employment of Air Power. FM 100-20 outlined six basic tasks for Air Force units in combat operations: destroy hostile air forces; deny the establishment and destroy existing hostile bases; operate against forces that pose a threat to the U.S. or its allies’ national interests; conduct offensive air warfare against an enemy’s sources of military or economic strengths; operate as part of a task force in the conduct of military operations, and operate in conjunction with or in lieu of naval forces.

Tactical air support of Army ground forces was one of the main issues addressed in the postwar restructuring and a key reason for the establishment of TAC as one of the three major commands. World War II had established the necessity to achieve air

superiority over the battlefield. Army Chief of Staff General Dwight Eisenhower believed the most efficient means of obtaining air superiority was through the employment of air power operating under a single command. Eisenhower recognized the mutually dependent nature of the armed services and advocated the separation of roles to avoid duplication. Although a segment of tactical air power supported ground forces, Eisenhower believed air power possessed an inseparable character; therefore, all its assets should remain the responsibility of the AAF. Commanding General of the AAF General Henry Arnold, and his deputy and successor, General Carl Spaatz agreed with Eisenhower’s position and understood a promise of continued support of Army Ground Forces (AGF) inched the AAF closer to autonomy.\textsuperscript{18} Including TAC as a major command proved to AGF that the Air Force took its support role seriously and served as an indicator of amity. Regardless of TAC’s establishment as a major command, however, tactical air support was not the first priority for the AAF in its restructuring or its pursuit of independence.

During World War II, unconditional surrender of the Axis powers had been America’s political objective, which allowed U.S. forces to operate with minimal restraint. In an environment rich with targets, strategic bombing demonstrated the unique ability to operate behind the battle lines with the objective of striking the enemies’ war-making capabilities and breaking the will of the opponent. Furthermore, the long-range, strategic bomber provided the U.S. its only means of delivering its most destructive weapon, the atomic bomb. To Army Air Force generals, the bombing offensives were a

key element in obtaining victory and hastened the outcome, saving the lives of countless American soldiers. Army Ground Force generals, however, argued that close support and interdiction missions contributed more to the war effort than strategic bombing. Air commander’s claims of victory through strategic air power were largely overstated. Nevertheless, the perceived efficacy and economy of strategic air power along with its continued growth and development presented an attractive means of conducting warfare in the future and provided a rationale for Air Force independence.\(^{19}\)

While generals debated the proper employment of air power, AAF planners faced multiple tasks as they built a combat ready force in the postwar era. Officers involved in the postwar planning simultaneously reorganized the major commands, deployed air forces overseas, built a postwar force structure, and planned for the independent Air Force. Furthermore, the AAF had to balance all of these tasks while managing the precipitous postwar demobilization. At its World War II peak, the AAF consisted of 243 groups supported by over 1.9 million enlisted personnel and more than 380,000 officers. By December of 1946, AAF’s force structure had dwindled to 52 groups and just over 341,000 total personnel.\(^{20}\)

Appointed Commanding General of the AAF in February of 1946, Carl Spaatz worked the rest of the year to slow the demobilization and set a target of rebuilding to a 70-group strength. The mission of the restructured Air Force in Spaatz’s assessment was: “(a) To provide a long-range striking force in instant readiness and with the power and capacity to destroy the storehouse of enemy weapons and


thereafter to reduce the enemy’s industrial capacity and war-making potential [and] (b) To provide in peacetime a minimum establishment for prompt and rapid expansion from peace to war.” Spaatz viewed these two tasks as the most urgent for national security interests and gave priority to, “the backbone of our Air Force—the long-range bomber groups and their protective long-range fighter groups organized in our Strategic Air Force.”

Although all of the major commands of the AAF suffered the effect of demobilization and budget cutting, Spaatz’s prioritization ensured SAC would fare better than the other major commands. Advocates of tactical air power also supported SAC. Major General Otto Weyland, who commanded the Nineteenth Tactical Air Force in support of the U.S. Third Army during World War II, assisted in developing the postwar plans for the strategic air force. Serving as Assistant Chief of Plans at Headquarters AAF in 1946, Weyland accepted Spaatz’s emphasis on SAC, particularly considering the nuclear monopoly held by the strategic arm at the time. “He had this concept,” Weyland recalled, “which was very sound and I subscribed to it. We couldn’t be strong everywhere. Although I was a tactical guy, I bought the idea that we should put the bulk of our chips into strategic air power.”

Weyland’s acceptance of the Air Force’s emphasis of the strategic air arm did not suggest a belief that tactical air power needs should go unattended. Interservice politics

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influenced the decision of TAC advocates to align with the proponents of strategic air power in 1946 and early 1947. The Navy represented a common opponent for all of the AAF’s major commands and required a unified effort to thwart their challenge to an autonomous Air Force. The Navy’s resistance to the formation of an independent Air Force stemmed from the perceived threat posed by unification of the services. Under the proposed Secretary of Defense and Joint Chiefs of Staff structure, the Navy would have to share coequal status with a third service and further degrade its autonomy. Moreover, an independent Air Force threatened the future of naval aviation and SAC’s mission endangered the Navy’s prominence as America’s global projection of power.\textsuperscript{23}

Cooperation between the AAF’s major commands was crucial in this period to secure independence. The AAF needed TAC to play an important role by strengthening their relationship with Army ground forces. Major General Elwood Quesada, TAC’s first commander and a leading advocate of tactical air power, lobbied Army ground force commanders in the Pentagon. Quesada’s goal was to convince ground force commanders that TAC could perform the mission of tactical air support better than the Army and would continue to provide support as part of the autonomous Air Force.\textsuperscript{24}

President Harry Truman’s signing of the National Security Act on 26 July 1947 marked a major achievement in the Army Air Force’s struggle for independence. Among the many provisions in the National Security Act of 1947, the public law created the National Military Establishment headed by a civilian Secretary of Defense, responsible

\textsuperscript{23} See Barlow, \textit{Revolt of the Admirals}, and \textit{From Hot War to Cold}.  
for establishing, “general policies and programs for the National Military Establishment
and for all the departments and agencies therein: and implementing “general direction,
authority, and control over such departments and agencies.” The act created separate
departments of the Air Force, Army, and Navy each with a civilian secretary and
provided provisions for the transfer of the AAF, the Army Air Corps and their assets and
personnel to the United States Air Force (USAF). Additionally, the act legitimized the
Joint Chiefs of Staff (JCS), consisting of the Chief of Staff, U.S. Army; the Chief of
Naval Operations; and the Chief of Staff, USAF. Among the JCS’s responsibilities were
“to prepare strategic plans and to provide for the strategic direction of the military
forces.”

Although the National Security Act of 1947 restructured the military agencies and
established an autonomous air force, it did not outline the functions of those services.
Executive Order 9877, signed the same day as the National Security Act by President
Truman, defined the roles for the individual services. The order defined specific
functions for the new USAF such as “1. To organize, train and equip air forces for: a. Air
operations including joint operations. b. Gaining and maintaining general air supremacy.
c. Establishing local air superiority where and as required. d. The strategic air force of
the United States and strategic reconnaissance… f. Air support to land forces and naval
forces, including support of occupation forces…” The order also spelled out functions

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25 Public Law 253, The National Security Act of 1947, 80th Congress, First Session. For more on the
National Security Act see Douglas T. Stuart, Creating the National Security State: A History of the Law
for the Navy and the Army in a similar fashion and included language for continued development and employment of aviation.\textsuperscript{26}

Instead of clarifying the functions of the armed services, Executive Order 9877 created more conflict, chiefly between the Air Force and the Navy. The order outlined the specific functions of naval aviation as, “Naval reconnaissance, antisubmarine warfare, and protection of shipping.”\textsuperscript{27} Nevertheless, the Navy’s interpretation of the National Security Act of 1947 and Executive Order 9877 initiated a difference of opinion between the Air Force and the Navy. The Joint Congressional Aviation Policy Board reported on 1 March 1948 that, “the Navy interprets the law to permit it to develop any type of weapon and to base its plans and requirements on the utilization of any weapon. The Navy contends that it is complying with the law in disregarding the Executive order on this point because the law and the Executive order are in conflict.” The report went on to suggest amendment of the act or revision of the Executive order to “increase effectiveness, efficiency, and economy of the National Military Establishment.”\textsuperscript{28}

The disagreements between the services prompted Secretary of Defense James Forrestal to arrange a meeting of the JCS in Key West, Florida in early March 1948 to resolve the incongruities. Although infighting would continue for decades, the Key West agreement supplied a more detailed explanation of the services primary and secondary missions. Service responsibilities remained unchanged with the Navy given preeminence in combat operations at Sea; the Army assigned land combat and responsibility for

\textsuperscript{26} Executive Order no. 9877, \textit{Functions of the Armed Forces}, 1947.

\textsuperscript{27} Ibid.

\textsuperscript{28} Senate, \textit{National Aviation Policy: Report of the Congressional Aviation Policy Board}, 80\textsuperscript{th} Congress, 2\textsuperscript{nd} Session, 1948, Senate Report 949, 1948, 6-7.
providing antiaircraft artillery; the Marine Corps assigned amphibious combat; and the Air Force assigned strategic air warfare, defense of the United States against air attack, and air and logistic support of ground units. Secondary missions included provisions for the services to supply mutual support without engendering animosity.29 The Key West agreement clarified service missions sufficiently enough that President Truman revoked Executive Order no. 9877.30

In regards to TAC, the squabbling between the Navy and the Air Force and the resulting Key West agreement resulted in specific language regarding tactical air power in the Air Force’s primary functions. Among the Air Force’s responsibilities, was “to furnish close combat and logistical air support to the Army, to include air lift, support, and resupply of airborne operations, aerial photography, tactical reconnaissance, and interdiction of enemy land power and communications.”31 Additionally, despite the growing influence of SAC, the lack of comment from Army leadership regarding tactical air power during service role debates indicated that the Key West agreement reaffirmed the Air Force’s commitment. In a memo to Forrestal on 3 November 1947, Eisenhower responded to a request to evaluate the level of satisfaction with Air Force tactical air support and current resource allocations. Eisenhower restated his stance on the unnecessary duplication of service roles and reiterated that control of the tactical air force

29 Departments of Air Force, Army and the Navy, Functions of the Armed Forces and the Joint Chiefs of Staff, 21 April 1948.
30 Executive Order no. 9950, Revoking Executive Order No. 9877 of July 26, 1947, Prescribing the Functions of the Armed Forces. April 21, 1948.
31 Functions of the Armed Forces and Joint Chiefs of Staff.
should remain in the hands of the USAF, less that the Army create another air establishment.\textsuperscript{32}

The position taken by the Army Chief of Staff and Quesada’s lobbying, along with the functions delegated in the Key West agreement effectively silenced Army commanders still concerned about the Air Force’s tactical air support capabilities. Moreover, strong ties between the Army and Air Force community lingered in the postwar period and likely made Army leadership reluctant to voice differences with the Air Force publicly. A sense of common interest among West Point classmates and shared experiences from World War II left the Navy on the outside in the post-independence period, and allowed the Army and Air Force to work through differences via old relationships.\textsuperscript{33} In the short term, the debate over control of tactical air power between the services was over, however, TAC’s struggle would continue as an intraservice matter.

Congruent with the Air Force acquiring independence and the services settling basic functions, Quesada attempted to build TAC into a viable combat arm. Despite budgetary limitations, Quesada successfully conducted joint training exercises working closely with General Jacob Devers of Army Field Forces. Throughout 1947 and 1948, Quesada was translating his wartime experiences into doctrine. The Twelfth and Ninth Air Forces trained with the Army’s Second Infantry Division, the Eighty-second Airborne, and the Second Armored Division. The training culminated in Operation Combine, a joint training exercise in which all squadrons of TAC along with units from

\textsuperscript{32} Memo for the Secretary of Defense from Army Chief of Staff Eisenhower, “Tactical Air Support,” November 3, 1947 in Wolk, \textit{Planning and Organizing the Postwar Air Force}.

\textsuperscript{33} Ziemke, “In the Shadow of the Giant”, 60.
SAC and the Army’s Eighty-second Airborne demonstrated the power of combined arms. The Ninth Air Force conducted Operation Combine at each of the Army’s eight ground forces schools. Additionally, TAC moved from prop-driven aircraft to jets under Quesada’s leadership. Through Operation Combine and other training exercises, Quesada honed tactical doctrine and updated it to make way for the jet age, while providing practical learning experiences for personnel.\textsuperscript{34} Quesada was on his way to building TAC into a well-trained professional command. Nevertheless, the changing political landscape in Europe, new leadership in key Air Force positions, and the reorganization of commands would advance the predominance of SAC and devastate tactical air capabilities.

By the end of 1946, the Truman administration realized continued cooperation with the Soviet Union was unlikely. The Greek Civil War between the Greek government, supported by the U.S. and Great Britain, and the Greek Communist Party’s militant arm, the Democratic Army of Greece along with Soviet pressure on Turkey to give Russian shipping access to the Turkish Straits, alarmed the U.S. concerning the aims of Soviet expansionism. The situation in Greece and Turkey prompted President Truman to seek aid for the two countries to prevent them from falling into the Soviet sphere. On 12 March 1947, Truman appeared before a joint session of Congress to request $400 million in aid. His speech announced the commonly referred as Truman Doctrine: “that it must be the policy of the United States to support free peoples who are resisting attempted subjugation by armed minorities or by outside pressures.” Announcement of

the Truman Doctrine along with continuing developments in Europe such as the Soviet supported coup d’état in Czechoslovakia and Josef Stalin blocking the allies from delivering food and supplies to West Berliners, confirmed the bipolar nature of postwar world power. Although the possibility of war with the Soviet Union seemed unlikely for at least a decade, the U.S. recognized the Communists as its most menacing threat.35

General Spaatz envisioned the greatest threat to the United States coming from “a large population which may become warlike, and a vast industrial resource for the production of weapons.” In the late 1940s, these conditions only existed in the Northern Hemisphere. Spaatz had in mind Western Europe, Eastern Eurasia, and Central Asia, any power from these areas could launch an attack with long-range bombers or guided missiles, which would follow a route over or near the Arctic region. Likewise, U.S. weapons would have to follow the same route and possess similar characteristic to reach “the war chests of the enemy.” “It is for that reason,” Spaatz stated, “we have included in our provision of air force units, in our procurement of aircraft, and in our experimental development programs—men, money, and materiel to produce an air force with a long-range striking force—a strategic air force.”36

With the Air Force asserting its strategic mission, the debate between the services now concerned control of atomic weapons, resulting in TAC’s diminishing influence.

36 House, Military Establishment Appropriation Bill for 1948, 602.
Although the Soviet Union displayed a more aggressive posture, risk of war was low and the U.S. maintained an atomic monopoly. Secretary of Defense Forrestal observed the problem of strategic planning without knowing the form and character of a future war.

No one knows the form and character of any war of the future. War planning—so-called strategic plans—are largely an intellectual exercise in which the planners make the best estimate of the form of a war against possible enemies. But the actions of any enemy must, necessarily, profoundly affect any war planning. If one did not have an enemy, it would be possible to have a perfect plan that could be taken off the shelf for immediate execution, but unfortunately the enemy does not always conform.\(^{37}\)

Disregarding the unknown form and character of a future war, each service promoted a strategic outlook that best endured President Truman’s pressure to cut defense spending and return to a peacetime economy. The services recognized continued growth depended on the development of an atomic mission.\(^{38}\) The age of atomic strategy began with the armed services pursuing defense planning less concerned with analysis of probable threats than fighting each other for prominence and money. The USAF proved a capable opponent in the battle for budget considerations and advancing their position, the Navy and Army quickly realized that the Air Force sought the position of predominant service.

At the time the Army and Navy came to understand the Air Force’s nature, the Air Force was undergoing changes in leadership. General Carl Spaatz retired as Air Force Chief of Staff on June 30, 1948, and succeeded by General Hoyt Vandenberg, a successful World War II AAF commander with a background in tactical air power. During World War II, Vandenberg served as Chief of Staff of the Twelfth Air Force, a brief stint as Chief of Staff of the Northwest African Strategic Air Force, and then


\(^{38}\) Barlow, *Revolt of the Admirals*, 65-80.
finished the war as Commander of the Tactical Ninth Air Force in Europe. Vandenberg was praised by reporters in Europe as “one of the chief architects of the system of air and ground cooperation” during the war. His time as Commander of the Ninth did meet with some criticism, however, from a few top airmen. A few critics believed the Ninth worked too closely with ground commanders and provided support for ground troops at the expense of more important missions. Nevertheless, Vandenberg displayed no preference to TAC as Chief of Staff and his actions proved he accepted the prominence of the Air Force’s strategic mission.

Vandenberg started his tenure at a time when fiscal limitations forced the Air Force to restructure and economize. In the spring of 1948 work began on the 1950 fiscal year budget request anticipating enlarged appropriations to support expanded personnel strength and aircraft procurement to reach the 70-group program. The Air Staff initially submitted a request for an $8 billion appropriation to the secretary of defense, however, suspicion that the other services would act unilaterally on their own budgets prompted Secretary of the Air Force Stuart Symington to increase the request to $11 billion. Symington assumed that asking for everything the Air Force could get would result in proportional cuts among the services and bring the amount back to the original $8 billion. An economic recession, however, created a deficit of nearly $2 billion resulting in President Truman capping the defense budget for fiscal year 1950 at $14.4 billion. Truman refused any attempts from Forrestal and the service secretaries to increase the budget, which left the Joint Chiefs of Staff to work out how to acquire their share. The

Air Force came out slightly ahead of the Army and the Navy with $5.025 billion, with $4.834 billion going to the Army and the rest to the Navy.\textsuperscript{40}

Falling $3 billion short of expectations, the Air Force would be unable to expand to 70 groups and planned for 48. Moreover, it had to find ways to economize in order to meet requirements for its strategic mission. Establishing the Continental Air Command (ConAC) on 1 December 1948, the Air Force combined resources considered multi-purpose. The Air Force reduced Air Defense Command and TAC to operational headquarters and ConAC took direct control over the previous major commands’ six air forces. The USAF Senior Officers Board determined that the existing jet fighters, the F-84 and the soon to be operational F-86, possessed enough flexibility to serve sufficiently in both a tactical role and as interceptors. This factored into the reasoning for the consolidation of commands, although the board did recommend that ConAC acquire a dedicated interceptor by 1953-1954 due to the limitations of the F-84 and F-86. Air Force thinking determined that the versatility of the fighters permitted assignment and regrouping of units to either tactical or air defense purposes as required by circumstances.\textsuperscript{41}

USAF Headquarters believed the ConAC organization would increase efficiency and provide the most economy. Additionally, it complemented strategic planning and doctrine formation regarding probable future wars. Col William H. Wise, deputy chief of the Air University’s Evaluation Division, considered the consolidation fundamentally sound and in accordance with the Air Force’s mission. Whereas World War II was a war

\textsuperscript{40} Futrell, Ideas, Concepts, Doctrine, 241-242.
\textsuperscript{41} Futrell, Ideas, Concepts, Doctrine, 241-242; Ziemke, In the Shadow of the Giant, 67-68.
of discrete theaters, Wise believed future wars would turn the entire globe into a single theater making ground force invasions unnecessary.

When we consider the probable methods and nature of a future war we see nations rather than armies fighting each other. War will become a conflict aimed at the destruction of national economy, industry, politics, and peoples. Advances in psychological, biological, and atomic warfare point toward total nation capitulation rather than toward decisions reached on a field of battle, or in limited theaters, through the defeat of one army by another.

Wise believed tactical air power would see limited action in future wars and relegated to “mopping up” duty as part of an occupation force. Wise’s predictions for a future war dominated Air Force thinking. Additionally, SAC’s new commander would strive to keep the Air Force’s strategic mission its first priority.

General Curtis LeMay returned from his duties as Commander of USAF Europe (USAFE), in October of 1948 to head SAC. One of the USAF’s most controversial figures, LeMay had been the architect of the firebombing of Tokyo and 64 other Japanese cities. Known as bluntly honest and possessing a brutal streak of realism, historians and journalist have attributed quotes to him concerning the conduct of war like, “You’ve got to kill people and when you kill enough of them, they stop fighting.” Regardless of his surly reputation, LeMay was a proven leader and the most prominent military mind in the realm of strategic bombing. In 1942, LeMay organized and trained the 305th Bombardment group and led them into combat in the European Theater. He developed formation procedures and bombing techniques used in both the European and Pacific Theaters. LeMay worked his way through several command positions including the

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Twenty-first Bomber Command, noted for their strikes on the Japanese mainland, before becoming chief of staff of the Strategic Air Forces in the Pacific. As Commander USAFE, he organized the air operations of the Berlin Airlift. LeMay found SAC in poor shape when he took command. He considered SAC inadequately trained, poorly organized, and lacking combat capability, a situation that resembled his stint with the 305th Bombardment group at the time of America’s entrance into World War II. LeMay’s outfit lacked wartime readiness and required more manpower and equipment. Thrust into war in Europe in 1942, the situation forced LeMay to apply ad hoc training and doctrine that took months to produce results. His solution for SAC was to “put the command on a wartime footing.” “The best way to maintain peace,” LeMay said, “was to build the strongest and most professional force the world had ever seen to be ready, by God, today to fight in case we had to; not tomorrow or next month, right now.”

By promoting professionalism and a combat ready force, LeMay built a culture at SAC rooted in the belief that his outfit was America’s arm against the Soviet Union. Placing SAC “on a wartime footing” allowed LeMay to benefit from the Cold War rhetoric building in Washington. While LeMay provided direction for SAC and promoted the Air Force’s strategic mission, leadership in the tactical air power arena faltered. Quesada opposed the consolidation of TAC and ADC under ConAC, citing the

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reduction of TAC’s status as a violation of the agreement between the Air Force and the Army concerning air support. Quesada believed the best way to avoid the Army from reentering the tactical air business was to make it indispensable under the Air Force. Vandenberg disagreed with Quesada. The Chief of Staff felt that Quesada’s cooperation with the Army and TAC as a major command provided the Army with too much influence over Air Force planning. Nevertheless, Vandenberg offered Quesada command of the new organization despite their disagreement. Quesada declined and took an assignment to help draft legislation to nationalize the Air National Guard and then headed the test project for the first hydrogen bomb. In 1951, Quesada retired amidst rumors that he was resigning in protest over the treatment of tactical air power.46

Command of ConAC went to General George Stratemeyer who had commanded ADC. Stratemeyer did not share the same misgivings as Quesada, although as commander of ADC he experienced worst neglect from the Air Force than TAC. Quesada’s successor to the downgraded Tactical Air Command was Major General Robert M. Lee. Lee, like Quesada, was an advocate of tactical air power. In August 1944, he joined the Ninth Air Force in France and served as deputy commander for operations under Vandenberg. After the war, Lee served as the first Chief of Staff for TAC, and later as deputy commander under Quesada and assisted in developing the first comprehensive doctrine of tactical air power. Despite TAC’s downgrade, Lee was determined to make the most of available assets.47

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47 Ziemke, “In the Shadows of the Giant”, 74.
Lee would discover, however, that his assets were extremely limited. As an operational headquarters, TAC consisted of only 150 personnel for planning and conducting joint training exercises. TAC no longer controlled its own units and had to request them from ConAC anytime the outfit conducted joint exercises or training. After exercises concluded, units returned to their respective commands. The new coordination process prevented TAC from gaining the full benefit of lessons originating from exercises, which caused institutional memory to suffer and retarded improvements in doctrine. Additionally, TAC’s reduction to an operational headquarters caused friction with the Army. TAC’s loss of a major command status indicated to many Army commanders that the Air Force would neglect tactical capabilities to secure primacy of its strategic mission. The Army reasoned that if the Air Force was required to make any further cuts it would also come from tactical assets and not strategic. Army officers also noted the problems of TAC requesting assets for exercises from ConAC. The reorganization squelched the close working relationship Army divisions developed with TAC, and Army commanders were concerned that testing and maintaining close air support techniques would suffer without tactical units continuously training with them.  

The reorganization of TAC under ConAC also opened the door for criticism from the Army concerning the Air Force’s adoption of an all jet force. The Army cited several areas where piston-engine, propeller aircraft possessed advantages over the new jets including shortened range and battlefield endurance. Additionally, suspicion of increased vulnerability to ground fire, limited armaments, and large takeoff requirements led the

Army to believe that jets were inadequate for the close support mission. Although the Army supplied a reasonable argument against an all jet force, their perspective of tactical air power was narrower than the views held by the Air Force. The Air Force positioned close air support within a larger context of tactical air operations. Gaining and maintaining air superiority and interdicting enemy forces and supplies prior to reaching the battlefield were tactical responsibilities the Air Force viewed as important as close air support. From the viewpoint of Air Force leadership, in future wars, if the strategic air offensive and interdiction missions succeeded, close air support would not be of major importance. 49 Considering the Air Force’s understanding of tactical air power, jets represented a force of multi-purpose aircraft capable of performing roles across a broader spectrum of operations. Maintaining piston-engine fighters strictly for support of the Army lacked prudence under the fiscal limitations imposed on the nation’s armed forces.

A series of gunnery range and bombing tests performed by the Air Proving Ground Command demonstrated that the Air Force’s F-80, F-84, and F-86 outperformed Air Force and Navy propeller planes in tactical operations. A board of review established to assess TAC’s close support capabilities concluded that the jets demonstrated superior accuracy due to the absence of propeller or engine torque. Additionally, the jets’ nose-mounted guns solved the issue of managing converging fire, a problem associated with the wing-mounted weapons of its predecessor. The presence of dive brakes also increased agility over prop-driven aircraft, which allowed the jet to slow and accelerate quicker. The Air Force also answered the question of vulnerability to ground fire. Engine tests conducted by aircraft manufacturers, Air Materiel Command, and the Air

Proving Ground Command dispelled the myth that one or two bullets would cause a catastrophic fire or explosion. A severed fuel line would cause a serious fire and likely result in an explosion, but a fire of this type was also a problem for piston-engine aircraft. Other tests demonstrated that the airframe was no more vulnerable to enemy fire than propeller-driven planes. Furthermore, TAC argued that the greater speed and agility of the fighter jets presented a more elusive target to antiaircraft fire.  

The Air Force’s tests refuted many claims of the jets’ deficiencies, but they could not counter the Army’s assertions concerning a lack of range and endurance. The F-80, with a full bomb load and no external fuel tanks, could only operate in a radius of 150 miles and return to base or sacrifice munitions capacity and versatility by adding wingtip mounted tanks. Distance was less of a problem, however, than loiter time. The voracious fuel consumption prohibited jets from lurking over the battlefield for an extended period. Only the F-84, which entered service in the spring of 1949, possessed a combat radius the Army found suitable. The fighter-bomber could travel 650 miles while carrying two 500-lb bombs and could loiter over the battlefield for two hours at a distance of 300 miles from base. The Air Force’s tests dispelled many of the Army’s misgivings concerning the use of jets for close air support, but range and endurance remained an issue for the first generation of fighters.

TAC successfully rebutted the majority of points in the Army’s argument, however, two joint exercises in the early 1950s revealed other shortcomings in the Air Force’s preparedness to conduct air support operations. In the joint amphibious exercise,

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51 Ibid, 103-104.
Operation Portrex on Vieques Island west of Puerto Rico, a number of weaknesses appeared in the Air Force’s tactical air control system. Issues arose quickly during the exercise. Although tactical aircraft were on air alert, it took 25 minutes to respond to requests for support. The issue stemmed from poor communication, lack of training, and insufficient interservice cooperation. Forward air controllers lacked radio discipline and overloaded frequencies adding to delays. Equipment malfunctioned due to poor packing and needed repair once it arrived, causing further delays. Furthermore, the radar used to control the fighters could not track individual jets and exposed a need for updated equipment. Equipment issues were not limited to ground equipment; a bearing issue grounded one of the two F-84E fighter-bomber groups, leaving the remaining group to cover the entire operation.\footnote{Ibid, 105-106.}

In late April, early May another joint exercise took place near Fort Bragg in North Carolina, called Swarmer. Swarmer was a large exercise involving 26,000 ground troops and 3,344 air sorties flown by a mix of airlift, fighter-bomber, fighter-interceptor, light-bomber, and reconnaissance aircraft. The Army found the support the Air Force provided as adequate, however, the Air Force noted many of the same issues reoccurring from the previous exercise. Lack of training, equipment issues, and poor communication plagued the operation. USAF Deputy for Operations General Lauris Norstad served as the maneuver commander and acknowledged the weaknesses in tactical air control. Norstad, along with the Army, attributed the issues to the downgrade of TAC to an
operational command. Norstad recommended that TAC should receive its own units to maintain training and continuity, essentially returning it to a major command status.\textsuperscript{53}

For a year-and-a-half, TAC’s capabilities withered under ConAC. Although the Army deemed TAC’s close air support capabilities and the jet force adequate, the Air Force was aware of underlying issues. Current aircraft, chiefly the F-84, proved versatile enough to fill the close support role, while the F-86 and F-80 complemented the Air Force’s comprehensive view of tactical air power. The same aircraft fulfilled the needs of air defense, although Air Force predictions concluded the need for a dedicated interceptor. Versatility in personnel, however, was another matter. The Air Force’s vision of making ConAC the manager of air defense and tactical assets failed when it came to its human resources. Personnel were less flexible than aircraft and not as easily adaptable to fill roles as needed. The lessons derived from Operation Portrex and Swarmer prompted the Air Force to consider placing units directly under TAC’s command to sharpen capabilities. Nevertheless, developments on the Korean Peninsula would take precedence over organization issues. War would press TAC into operations relying on the institutional knowledge that remained.

The North Korean People’s Army (NKPA) crossed the 38th parallel on 25 June 1950 and launched an all-out attack against the Republic of Korea. Although fearful of Communist aggression from the North, the Republic of Korea’s (ROK) lightly armed forces offered meager resistance to North Korean infantry and Soviet-built T-34 tanks. Columns of infantry and tanks drove through the ROK lines en route to Kaesong and Chunchon, while NKPA forces landed on the east coast, south of Kangnung. The U.S.

\textsuperscript{53} Ibid, 107-108.
Korean Military Advisory Group (KMAG) field advisers were slow to react to the unfolding situation. Communist raiding parties had crossed the 38th parallel before, which made American observers hesitant to report the action as an all-out invasion. Reports of the attack did not reach Far East Air Forces (FEAF) Headquarters in Tokyo until nearly six hours after the invasion had started and after the NKPA had taken Kaesong.54

The attack caught the U.S. off guard as much as it did the ROK. General Stratemeyer, who had left ConAC in April of 1949 to take command of FEAF had been in Washington for conferences and was somewhere in the skies over the Pacific making his way back to Tokyo. Far East Command possessed only one mission in the advent of war in Korea, which was to provide for the safety of American nationals in country. Supreme Commander for the Allied Powers General Douglas MacArthur had assigned FEAF to supply air transport for Americans out of Korea and to attack ground targets in support of the evacuation, but only if he issued instructions to do so.55

As Far East Command and FEAF prepared to evacuate Americans, the State and Defense Departments and President Truman discussed options for an American response and the application of air power. Due to the perpetuation of the strategic bombing mission and the confidence that the Soviets were behind the invasion, civilian officials and Truman issued orders to General Vandenberg to make plans to destroy all Soviet bases in the Far East. Vandenberg warned, however, that planning and deploying a

strategic mission of that nature, even with atomic weapons, would take considerable time. Truman waived all restriction on Air Force actions south of the 38th parallel the night of 26 June. By mid-day on 27 June, the situation worsened in Korea. The NKPA turned back a South Korean effort to save Seoul from falling to the Communists. The ROK Army’s failure to win its own battle dashed American hopes that South Korea could survive without external armed assistance. Later that day, General MacArthur warned the JCS of the imminent collapse of South Korea without American military assistance.\(^{56}\)

Supported by a United Nations Security Council resolution pledging assistance to South Korea, President Truman authorized air operations north of the 38th parallel on 29 June. The JCS sent instructions to General MacArthur to expand air attacks to military targets throughout the Korean Peninsula. Early air operations, however, were limited due to available resources. FEAF’s main combat force, the Fifth Air Force, primarily focused on the air defense of Japan instead of the comprehensive tactical mission of air superiority, interdiction, and close support. Furthermore, FEAF possessed a relatively small force to provide military assistance to South Korea. General Stratemeyer had at his disposal twenty-two B-26 light-bombers, twelve B-29 heavy bombers, seventy F-80s, and fifteen F-82s, a prop-driven long-range fighter.\(^{57}\) Missing from FEAF’s inventory was the F-84, the one jet considered most suitable for close support operations and the new F-86, USAF’s most potent air-to-air fighter. Acquiring the resources to fight a war took time, especially considering the USAF’s commitments around the world and the limited budgets imposed on the services after World War II.


Stratemeyer worked diligently to obtain the necessary personnel and equipment to strengthen FEAF’s effort in Korea. On 30 June, Stratemeyer communicated his aircraft needs to Washington; his request included 164 F-80 jets, 22 B-26s, 23 B-29s, and 64 F-51s. The USAF had a short supply of F-80s and offered 150 F-51s in its place. In other circumstances, Stratemeyer likely would have protested receiving the F-51 in place of the F-80, but the problem of range and endurance would hinder the available jet force in the Far East at the start of the Korean War. Along with the other noted weaknesses, jets required improved airfields to avoid damage from debris scattered by exhaust and longer runways to achieve the necessary ground speed for takeoff. South Korea possessed only two improved airfields suited for jets, Kimpo and Suwan near Seoul and under control of the NKPA. The F-80s had to operate from Japan, which possessed the closest American-controlled, improved airfields to Korea. In order to conduct missions in the skies over Korea, the F-80 had to use improvised external tanks on the wingtips, which limited payload, reduced performance, and often damaged wings. Compared to the F-80, the F-51 possessed an exponentially longer range and the capacity to carry a large and varied load of munitions. Nevertheless, the prop-driven fighter had its own share of shortcomings. The F-51 required more maintenance and parts for the aging fighter were scarce. Additionally, the F-51 was more vulnerable to ground fire due to its slower speeds and the presence of a liquid cooled engine, a lucky shot in the aircraft’s radiator was sufficient to bring the aircraft down.\(^{58}\) Initially, FEAF and the Army would have to accept compromises in the tactical air power available whether it came from jets or prop-

\(^{58}\) Ibid, 24; The F-51 was the same aircraft as the P-51, the World War II era, long-range, prop-driven, single-seat fighter. In 1948, the USAF changed the fighter aircraft designations from P (pursuit) to F (fighter).
driven aircraft. Fortunately, however, the North Korean Air Force (NKAF) FEAF would face at the open of the war possessed no advantage over the aging American aircraft. The NKAF was equipped with Soviet-built, World War II aircraft. The small air force consisted of 62 IL-10 and 70 Yak-3 and Yak-7B fighters along with an assortment of cargo and trainer aircraft to bring the total inventory close to 200 aircraft.\textsuperscript{59}

Friction between the services over the proper employment of air power against the NKPA arose nearly in conjunction with the start of operations. The first interservice conflict occurred between General Stratemeyer and General MacArthur. Unhappy with the management of the air campaign by Army officers, Stratemeyer confronted MacArthur and requested the same level of trust and responsibility he had given previous air commanders. MacArthur agreed, however, it did not solve problems between ground commanders who desired more close air support and air commanders who believed interdiction and strategic operations should take precedence. Cooperation with the Navy and the Marine Corps was even more difficult to obtain than with the Army.

Coordination in the first six months of the war between FEAF and the Seventh Fleet was minimal. MacArthur had given coordination control of joint air operations to FEAF, but incompatible technology, attitudes, and practices made FEAF ground control nearly impossible for carrier strikes. General Earl Partridge, Commander of the Fifth Air Force devised the most workable solution by assigning a dedicated area of the battlefield to the Navy.\textsuperscript{60}

\textsuperscript{59} Futrell, The USAF in Korea, 19.
The Air Force’s relationship with the Marine Corps proved as tenuous as the one with the Navy. In early August, the First Marine Air Wing arrived to support the Marine brigade assigned to the Eighth Army. Marine aviation units assigned to air support were directly subordinate to the infantry. A dedicated wing of Marine aircraft supported a division of infantry and possessed its own ground control intercept and tactical control squadrons, along with air observers for each Marine battalion, the equivalent of the Tactical Air Control Party of the Army/Air Force system. The Marines’ training and coordination, as members of the same service, surpassed the efforts of the joint exercises involving the Army and Air Force. Interservice controversy soon ignited when articles appeared in U.S. newspapers heralding the superiority of Marine close air support in mid-August. The articles claimed that the Air Force’s jets were inappropriate for the close support mission and that Army commanders clamored for support from the Marine prop-driven aircraft. The articles angered Stratemeyer and MacArthur feared that they would cause more conflict. Vandenberg launched a public relations campaign by collecting supportive statements from Army commanders and made sure that Edward R. Murrow of CBS, who had flown combat missions with the FEAF, would devote substantial airtime to highlight the Air Force’s contributions to the ground campaign. The incident exposed the sensitivity of the Air Force to accusations of incompetence and affirmed the continued animosity between the services over roles and missions. Although Marine aviation demonstrated a level of effectiveness and coordination that other tactical air power lacked, the Army failed to consider in its praise that Marine amphibious landings

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lacked organic, land-based artillery support that Army forces often enjoyed, which required air support to fill the void.

Despite the issues with interservice cooperation, tactical air power witnessed some success in the opening months of the war. The North Korean pilots lacked skill and experience. Although critics questioned the effectiveness of jets in close air support, pilots of the Air Force’s F-80 and the Navy’s F9F enjoyed the advantage of superior technology and skill over their opponent in air-to-air engagements. Additionally, Lt. Gen. Walton H. Walker, Commanding General of the Eighth Army praised tactical air operations and believed that air support prevented the NKPA from forcing U.S. forces off the peninsula.62

By mid-August, joint air operations had gained air supremacy over the small North Korean Air Force paving the way for strikes on interdiction and strategic targets. The strategic campaign between mid-July and the end of October wreaked havoc on what little industry North Korea possessed. B-29s dropped over 30,000 tons of bombs and destroyed the majority of equipment and structures for the arsenal and rail yards at Pyongyang, chemical plants at Konan, and oil refineries at Wonsan. By the end of September, strategic targets became scarce and the UN counteroffensive had made enough progress that the JCS order MacArthur to concentrate resources on the tactical situation. Drawing from his experiences in World War II, MacArthur made an effort to minimize damage to the civilian section of North Korean cities and limit collateral damage. Nevertheless, the strategic campaign still received criticism, mostly in the form of propaganda stemming from the Soviets, but it did reach the world press. Tactical air

power received criticism as well. British observers criticized American ground forces for their liberal and overwhelming use of close air support.\textsuperscript{63}

Technology and firepower compensated for the lack of coordination and continued interservice bickering to make air power a contributing factor to United Nations Command’s (UNC) successes in the opening months of the war. UN forces had reclaimed much of South Korea and continued to move toward the 38th parallel by the beginning of October. The question now became whether or not to send forces north of the 38th parallel and liberate North Korea in an attempt to unify the peninsula under Syngman Rhee’s leadership. After receiving recommendations from the National Security Council, and considering the possibility of intervention by China and the Soviet Union, President Truman authorized MacArthur to submit a plan for the occupation of North Korea.\textsuperscript{64}

UN forces moved into North Korea and faced small pockets of resistance from NKPA troops. Logistical problems hindered the advance of ground forces as much as resistance from the enemy. The advance northward spread troops thin to prevent the NKPA from regrouping and logistical problems emerged as some units moved ahead of others towards the Yalu River. While UN forces progressed towards the Yalu, Chinese Communist Forces (CCF) crossed the river into North Korea. Friendly forces first encountered the CCF when two regiments of the Chinese attacked a battalion of ROK troops and captured half of them on 25 October. For nearly two weeks, UN forces engaged the CCF before the Communists suddenly broke contact. The sudden break in

\textsuperscript{63} Crane, \textit{Airpower Strategy in Korea}, 40-44.
fighting allowed MacArthur and his forces to regroup for a new and more cautious advance. After the initial engagements with the CCF, MacArthur ordered FEAF to conduct two weeks of “maximum effort” directed at destroying the Korean side of all international bridges along the Manchurian border then continuing southward to meet the battle line. The objective was to destroy the lines of communication between North Korea and China and obliterate any military installation, which included factories, cities, and villages. The first of these campaigns started on 5 November against the city of Kanggye when B-29s destroyed 65 percent of the city with incendiaries. The JCS cancelled the next strike against Sinuiju because of its proximity to Manchuria. MacArthur protested the decision and claimed that it was necessary to interdict Chinese reinforcements, which resulted in the JCS lifting the restriction. By the end of November, B-29s delivered over 3,300 tons of incendiaries and destroyed 10 towns. Furthermore, MacArthur interpreted the Joint Chief’s approval to bomb Sinuiju as approval to strike anywhere in North Korea. He lifted all restrictions on bombing south of the Yalu excluding hydroelectric facilities.

The increased bombing did not deter further CCF involvement. The rebalanced troops soon met with disaster upon resuming the advance in late November. The CCF had also used the break in fighting to regroup and bring in reinforcements, when the UN Eighth Army and X Corps reengaged the enemy they met a resilient and determined foe. The CCF forced a retreat by UN troops back towards the 38th parallel. Tactical air

power prevented the retreat from falling into chaos, but the withdrawal prohibited an effective ground control system. The Fifth Air Force supported the Eighth Army the best that it could, but coordination again became a problem, particularly with the Second and Twenty-fifth divisions, which encountered numerous Chinese roadblocks. The Marine Division, however, managed a much more orderly withdrawal and destroyed seven Chinese Divisions during the retrograde. The action tested the Marine close air-support system at the extreme and found it fully capable. The contrast between the Army/Air Force system and the Marines’ led to more criticism of Air Force close air support. The crisis gave General Stratemeyer the opportunity to bring the First Marine Air Wing (MAW) into the Joint Operations Center (JOC) system. Starting on 11 December, the First MAW would support the entire UN army, receiving logistic support from the Fifth Air Force when necessary.68

Communist Chinese ground forces were not the only new threat facing South Korea and UNC. Soviet MiG-15s began attacking UN aircraft in early November alarming commanders in Korea and the United States. The appearance of the MiGs was likely due to Josef Stalin and Soviet commanders’ belief that China was at risk of attack after American air operations close to the Chinese border. Stalin placed strict limits on Soviet MiG pilots, restricting their operations to the northwest corner of North Korea to prevent a shot-down aircraft from falling into enemy hands. Although the MiG possessed a limited range, it was superior in performance to any American aircraft currently in the FEAF inventory. The presence of MiGs ended the complete air supremacy American forces had enjoyed since dispatching the North Korean Air Force. The B-29s were

68 Millet, “Korea,” 372-373.
vulnerable to hit-and-run intercept missions from the Soviet aircraft and made continued bombing of targets close to the Chinese border costly. FEAF lost 16 B-29s to the MiG-15 over the course of the war and many more receiving heavy damage. General Vandenberg offered to send a wing each of the F-84E Thunderjet and the F-86A Sabre to Korea to combat the new threat. The two wings deployed to the Far East in record time and began operations on 17 December 1950. The F-86A was the best air superiority fighter in the UN’s arsenal and the only fighter capable of matching the MiG-15 consistently. Although the MiGs outnumbered the small contingency of F-86s, the skill and aggressiveness of American pilots helped restore UN air superiority.69

The Chinese intervention required Washington to reevaluate its policy in the Far East and prompted changes in UNC operations and the air war. The Truman administration reverted to its original goal of restoring the ROK and maintaining the division at the 38th parallel. From January to March of 1951, CCF and UN forces pushed back and forth until a final Communist offensive failed in late April resulting in the stabilization of battle lines and a stalemate. Air power factored heavily in thwarting the Communist offensive. Close air support along with artillery gave UN forces the edge in fire superiority, while the bombing of rebuilt airfields in North Korea spoiled Communist plans to deploy fighter-bombers in support of the ground offensive.70

By summer, the front lines had stabilized and FEAF turned its attention to disrupting enemy logistics. Nevertheless, ground commanders continued to call for air support even though the effect was limited on an enemy now entrenched in dugouts and

underground bunkers. Lt. General Otto Weyland, who assumed command of FEAF in July 1951, considered the continued use of close air support operations on the entrenched enemy as having a diminishing return. Weyland and other airmen believed stopping the enemy and his supplies from reaching the frontlines was the best use of tactical air power at this stage of the war. Interdiction missions, however, failed to stop the enemy from moving mass amounts of supplies and personnel to the front lines. When the CCF began to move their supplies at night the aging B-26 proved ineffective in the rough terrain and poor weather conditions of Korea.\textsuperscript{71}

The Air Force deemed the employment of tactical air power in the Korean War as effective. Although the Army saw the Marines’ close air support system as superior, Air Force commanders did not hesitate to point out that Marine tactical air supported small-scale operations with limited penetration beyond the frontline. The Air Force designed their system to support wide fronts and operate deeper behind the frontlines. Additionally, Air Force leaders reminded their Army counterparts that the air superiority effort enabled ground action, allowing troops to maneuver on the battlefield without fear of air attack.\textsuperscript{72} Not surprisingly, the Air Force had difficulty convincing the Army of the necessity of the air superiority or interdiction missions, as is often the case the unseen elements rarely receive appreciation.

Although possessing a background in tactical air power, General Vandenberg proved he would not favor TAC if it resulted in Army influence within the new Air Force or if its development taxed resources that could go to SAC. The move to place TAC and

\textsuperscript{71} Schlight, \textit{Help from Above}, 139-140.
\textsuperscript{72} Ibid, 141.
ADC under ConAC upset the recently retired General Spaatz, who saw the move as a violation of the agreement he and General Arnold made with General Eisenhower and damaged interservice cooperation. Moreover, General Quesada’s refusal to take over the new command placed TAC in further jeopardy. TAC lost a strong proponent when Quesada left to work on nationalizing the Air National Guard, and with him left institutional knowledge and a tactical air power advocate to influence ConAC. Lee was a capable commander of TAC as an operational headquarters, but with Quesada as commander of ConAC, TAC likely would suffer less than it did with Stratemeyer. Of the entire leadership turnover within the Air Force in the later 1940s, none had a more lasting impact than General LeMay’s arrival at SAC. Concerning LeMay’s command of SAC, General Weyland said, “He’s a pretty strong character in his own right. So he got this outfit shortly, and to his pleasant surprise, perhaps, or perhaps not that he had most of the chips. So he wasn’t satisfied with having most of them; he wanted all of them.”

Not only was LeMay the strongest supporter of the Air Force’s strategic mission, his work ethic and his ultra-realist philosophy on the conduct of war left its mark on SAC and American foreign policy that still resonates in the 21st century.

The integration of jets into the Air Force formed a wedge between the Army and TAC. The Air Force’s unwillingness to develop an aircraft for the sole purpose of close air support and their move to an all jet force set the boundaries for Army influence on air power. The Korean War drove the forming wedge between the Army and TAC deeper. The Army’s perception of the Marines’ possessing a superior close air support system revealed the Air Force’s sensitivity to criticism of its doctrine. Moreover, it revealed the

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limitations to Army/Air Force cooperation. Although TAC was willing to work closely with the Army in peacetime, the Korean War proved that the indivisibility of air power was a more important concept to tactical air commanders than interservice coordination and cooperation. Despite the friction between the services, the Korean War left TAC in a better position at the end of the conflict than when it started. The war proved that tactical air power was still a necessity and needed continued development. Additionally, the appearance of the MiG-15 caught the USAF off-guard and demonstrated that American war planners had underestimated Soviet technological developments. The USAF could no longer assume that achieving air supremacy was a foregone conclusion and that American bombers would always operate in a permissive environment. Development of new tactical aircraft would need to keep pace with Soviet designs.
CHAPTER 2: BUILDING A FIGHTER FORCE IN THE ERA OF STRATEGIC BOMBING

In the 1950s, Tactical Air Command underwent a modernization process fostered by its leadership in an attempt to thwart its marginalization and influenced by technological innovation. The command faced a number of issues in its efforts to modernize and remain a relevant apparatus within the national defense establishment. TAC’s relationship to the Army as a supporting force, a shift in national defense policy, and the emergence of tactical nuclear weapons affected its leadership’s decisions. The overriding factor, however, resided in the thinking of its commanders. The strict adherence to the indivisibility of air power, the principle of the harmonious interaction between all air power assets regardless of purpose, shaped tactical air power more than any other factor. TAC’s leadership would invoke this principle to block Army intrusion, advance its position, and ironically, align itself with the Strategic Air Command. Nevertheless, adhering to the indivisibility of air power resulted in the degradation of conventional capabilities and jeopardized TAC’s ability to fight a limited war.

The armistice signed on 27 July 1953 to end open fighting between Communist and United Nation forces in Korea allowed the USAF to begin assessing its role in the war. In an article by General Weyland appearing in the fall 1953 edition of *Air University Quarterly Review*, the commander of FEAF stressed the important role air power had played. Weyland dissected every phase of the war in the article and highlighted the particular achievements, such as the quick and near-total destruction of the North Korean Air Force, which allowed the UNC to maintain air superiority
throughout the war. Additionally, he pointed out the close air support and interdiction campaigns that permitted UNC forces to break out of the Pusan perimeter and later maintain an orderly withdrawal from North Korea once Chinese forces intervened. Weyland emphasized the pressure maintained on Communist forces by the air campaign once UN forces established the main line of resistance (MLR) early in 1951, which, in his view, forced the Communists to agree to the armistice. Moreover, he defended the interdiction campaign against critics who cited air power’s inability to stop the flow of supplies by stating, “Interdiction was an unqualified success in achieving its stated purpose, which was to deny the enemy the capability to launch and sustain a general offensive.” Weyland also countered criticism to the amount of close air support the USAF provided to ground forces by asserting that the interdiction mission provided much higher returns on the investment of air resources rather than against static and invulnerable forces at the MLR.  

Weyland ended his article by noting the blurred lines between strategic and tactical operations in Korea and the need to reconsider the strict separation between air power’s roles in wars of limited objectives. Despite Weyland’s closing thoughts, however, the article highlighted USAF’s efforts in close air support, interdiction, and air superiority, the pillars of tactical air power. The FEAF commander took advantage of other opportunities to tout the successes of the USAF in Korea as well as the accomplishments of the tactical mission. In a speech given to the Air War College on 27 January 1954, Weyland stated that the air effort had been tactical in nature “because of

74 Gen Otto P. Weyland, “The Air Campaign in Korea,” Air University Quarterly Review, Volume VI, No. 3 (Fall 1953), 3-27.
75 Ibid, 3-27.
the artificial restrictions that were placed upon us and which permitted no real strategic operations on the sustaining resources of the Koreans and later of the Chinese Communist forces.”76 The Korean War represented a small victory for TAC and left the outfit confident it had demonstrated its necessity and continued development in the future. Nevertheless, the lessons derived from the war along with a new presidential administration and defense policy kept TAC’s future in doubt.

Although the USAF looked back at the Korean War with a sense of pride and accomplishment, it did not view the conflict as the paradigm for future wars. Air Force commanders viewed the relative ease of achieving air superiority in Korea as an aberration, which did not inform them how to fight an air war against the Soviet Union in Europe. In a future conflict, gaining and maintaining air superiority would dominate the efforts of tactical airpower and substantially reduce the time for support and interdiction missions. Additionally, the belief that American forces would never again fight a conventional war dominated strategic thinking. Preparation for global war left little room to consider the possibility for conflicts of limited objectives.77 Weyland, however, indicated that defense planning should include the potential for limited wars. In his *Air University Quarterly Review* article he stated, “The Korean War has been a very complex one. It has been a laboratory study of limited military action in support of a very difficult political situation.” He went on to say, “It is most important for us to understand that the

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76 Gen. Otto Weyland, “Extract from General Weyland’s Speech Before the Air War College,” (lecture, Air War College, Maxwell AFB, AL, January 27, 1954) Call # K-239.7162 54-81, IRIS # 483572, AFHRA, Maxwell AFB, AL.

last two years of the war were fought to secure favorable terms under which to cease hostilities. With this kind of objective, the door is open for completely new patterns of air employment. The war to date has represented a short step in the direction of using air power as a persuasive force to attain limited objectives.”

The lessons Weyland took away from the Korean War may have gained traction under a different presidential administration, but President Eisenhower’s leadership and a policy of nuclear deterrence jeopardized TAC’s moderate gains in influence. Dwight Eisenhower’s military record and personality made him an attractive candidate for the presidency, but his intent to end the Korean War and prevent future conflicts of the same nature won him the election. Eisenhower and key members of his cabinet like Secretary of State John Foster Dulles and Secretary of Defense Charles Wilson were fiscal conservatives. Although they saw merit in the Truman administration’s concept of deterrence, they feared a contest in military spending with the Soviet Union could lead to American economic collapse. Furthermore, Eisenhower not only had hopes of preventing increased defense spending, but also reducing current levels. In response to Eisenhower’s economic and defense aims the National Security Council Planning Board released NSC-162/2 with the President’s approval in late October 1953, the final draft of a paper which outlined the parameters of the administrations containment policy.

NSC-162/2 became the foundation of Eisenhower’s New Look defense policy, which provided a guide, “To meet the Soviet threat to U.S. security [and] in doing so, to avoid seriously weakening the U.S. economy or undermining our fundamental values and

institutions.” The conclusions for defense against the Soviet Union outlined in NSC-162/2 included the continued development and maintenance of an offensive retaliatory strength “based on massive atomic capability.”

Before the Council of Foreign Relations in New York City on 12 January 1954, Secretary of State John Foster Dulles added the concept of “instant, massive retaliation” to the New Look policy. He stressed the importance of supplementing local defense against aggressors with the deterrent of massive retaliatory power, which allowed “the free community to be willing and able to respond vigorously at places and with means of its own choosing.” In addition to massive retaliatory strength, NSC-162/2 emphasized delivery of nuclear weapons via the strategic air arm but also “tactical” nuclear weapons, which provided a wider range of employment options. The wider spectrum of nuclear options would require less manpower and a smaller variety of conventional weapons, thus reducing expenditures, while the assertion the U.S. would respond with nuclear weapons would deter aggressors.

Although the Air Force planned for expansion—while the other services retracted—in the post-Korea 1950s, the emphasis remained on SAC. Nevertheless, the New Look did not threaten the survival of TAC to the same extent or in a similar nature as its pre-Korean War status reduction. Commitments to NATO and an increase in units deployed to Europe indicated TAC would keep a permanent mission. General

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Vandenberg, one of the advocates of Continental Air Command in 1948, now stated the importance of TAC’s continued mission. In June 1953, Vandenberg told Congress the tactical mission was essential, and “it also has a place of importance in Europe. In spite of the revolution taking place in methods of warfare, the NATO allies must still be prepared to offer direct resistance to invasion by enemy ground forces.”

Although the New Look did not threaten the survival of TAC, it did contribute to fundamental changes in the organizations mission. The New Look’s emphasis on nuclear weapons over conventional warfare permeated tactical thinking. General Weyland returned from FEAF in May 1954 to replace General John K. Cannon as commander of TAC and attempted to preserve as much of the conventional tactical force as possible. Nevertheless, during his tenure, TAC would witness a shift away from the traditional joint-operation missions and adopt its own nuclear mission as part of the Air Force’s massive retaliatory force.

TAC’s pursuit of a nuclear mission accelerated after the New Look became national policy, but adopting a nuclear capability and modernizing tactical air capabilities started under the leadership of General Cannon. The Air Force reestablished TAC as a major command on 1 December 1950, largely to meet the needs of mobilization of additional units for the Korean War. General Vandenberg assigned Lt. Gen. Cannon to head the restored command. Cannon was another tactical air power advocate, who had commanded the Twelfth Air Force and the Mediterranean Allied Tactical Air Force in Italy during World War II. Several developments transpired during Cannon’s command

that would influence the direction of TAC and gain momentum through the rest of the 1950s. First, the lessons emerging from the stalemate in Korea, which exposed the diminishing returns on close air support and prompted FEAF to divert tactical resources to the interdiction mission, a role that they preferred. Second, expanded commitments to NATO would increase TAC’s responsibility to the defense of Europe. Third, the development of smaller nuclear weapons deliverable by tactical aircraft led TAC to establish a “special weapons branch” in early 1951 to explore nuclear capability.85

Planning and development of the second generation of jet fighters began shortly after the reestablishment of TAC as a major command. General J. Lawton Collins, Chief of Staff of the Army, had recommended that the Army participate in determining the requirements for close-support aircraft. Moreover, the Army suggested that the Air Force should develop a light, close-air support aircraft for the sole purpose of supporting ground forces, which would prevent its diversion to other missions, as was often the case with multi-purpose aircraft. The Army went a step further by asserting that the Air Force should attach air groups to Army units, but still maintained it had no intention of taking over the tactical air force. Cannon countered by arguing that a war in Europe against the Soviet Union would initially demand the participation of all tactical aircraft to achieve air superiority. A light, close-support aircraft would be too vulnerable in the early stages of a war. Cannon also deemed the Army’s proposal of allocating air groups for the support of Army divisions impractical and uneconomical, noting it violated the principles of the concentration of force and centralized command. Additionally, the Air Force would most

likely never possess enough resources for the number of groups needed to support Army
divisions on a one-for-one basis.\textsuperscript{86}

General Cannon also saw the development of a specialized close-support aircraft
as cost prohibitive in a technologically driven environment that placed a premium on
speed and altitude. During a presentation at the USAF Fighter Symposium at Maxwell
Air Force Base, Colonel Howard D. Sutterlin War Plans Division, Director of Plans HQ
USAF, explained the relationship of cost to fighter performance:

During World War II, fighters such as the F-47, or F-51 cost on the order of 75-
100,000 dollars and were sufficiently uncomplicated to permit mass production
with comparatively little difficulty. Today, in searching for new aircraft suitable
for use during the next three to five years, we find that an extremely complicated
and expensive item is required. A fighter aircraft capable of reaching altitudes of
60,000 ft. or better and speeds in the vicinity of Mach 2.0 is needed. The cost of
this type of aircraft will be extremely high, several million dollars each.
Economic considerations will seriously limit the number of such planes we can
support in peacetime and makes it mandatory that each such aircraft be capable of
contributing considerably more to the total Air Force effort than has been
expected of fighter aircraft in the past.

Part of the expanding contributions of fighter aircraft Col. Sutterlin discussed, concerned
a nuclear capability. The technological innovation surrounding nuclear weapons led to
the development of smaller weapons, making their delivery feasible from tactical aircraft.
Sutterlin envisioned a nuclear mission for tactical aircraft that went beyond the battlefield
such as striking an enemy’s air capability at its source and claimed, “It is possible that a
number of such targets can be more successfully attacked by high performance fighters,
delivering nuclear weapons, than by other methods.”\textsuperscript{87}

\textsuperscript{86} Futrell, \textit{Ideas, Concepts, Doctrine}, 308-309.
\textsuperscript{87} Col. Howard D. Sutterlin, “Presentation by Col. Howard D. Sutterlin at the USAF Fighter Symposium,”
(presentation Maxwell AFB, July 26, 1954), Call # K-239.7162 54-94, IRIS #00918351, AFHRA, Maxwell
AFB, AL.
Combined with the improving technologies in midair refueling and supersonic flight, the tactical nuclear weapon seemed like the next logical step to modernize the jet fighter. The potentials for increased speed and range of fighter aircraft merged with nuclear weapons provided the Air Force a more precise and flexible means of delivery than SAC could provide and increased TAC’s firepower exponentially. In the Summer 1954 issue of *Air University Quarterly Review*, Deputy Commander of the Ninth Air Force Brigadier General James Ferguson expressed the allure nuclear weapons possessed for TAC. Ferguson recalled the experiences of World War II and Korea where hundreds of aircraft awaited on station “to be called down to fire a few rockets against a strongpoint, a pillbox, or the like.” Considering the “new field of weapons” and potential striking power Ferguson pondered the capability of a tactical nuclear mission: “Think of the physical results of such firepower. Imagine, for example, one fighter aircraft clearing a whole beachhead of opposition. Or, even more serious, imagine a concentration like ours on the Normandy beachhead, being caught by just one hostile bomber loaded with an H-bomb.”

Ferguson’s article promoted a calculus compatible with the New Look, one that called for the maximum amount of firepower for the lowest cost in manpower and equipment. Additionally, the article described how TAC’s increased firepower complemented the strategy of massive retaliation and could support the strategic bombing mission. Ferguson considered the offensive retaliatory force as divided into two parts. The first part was comprised of the strategic air force, which could “rain destruction on

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the principal sources of enemy military power and economic support of his military forces.” Sources of military and economic strength were massive targets suited to the capabilities of SAC. “Their neutralization,” Ferguson stated, “may cut out the heart of the octopus, but the tentacles can wriggle and work their way out to the Brest peninsula, through Southeast Asia, or deep into the Middle East before the life blood ebbs away.” The tentacles were the responsibility of the second part of the retaliatory force, and a mission that Ferguson believed suited TAC.\textsuperscript{89}

Officers of SAC, however, were less enthusiastic about the potential of a nuclear-capable TAC. General LeMay viewed TAC’s nuclear mission as an encroachment on the strategic air arm. “I remember we at SAC fought this at the time they came in,” he said in an oral history interview in 1971, “because there wasn’t enough atomic weapons, in our mind, to do a proper strategic job, and we didn’t think TAC ought to get into it.” Weapon stockpiles were not LeMay’s only concern. “When they did start getting into it they didn’t want to get into it in their own field, they wanted to use them on strategic targets within the range of equipment they had, which was duplication of the effort we were doing.”\textsuperscript{90} The duplication of roles had been a key subject in interservice issues that also perpetuated intraservice rivalry within the Air Force. General Cannon, however, viewed TAC’s nuclear mission as alleviating the duplication of roles, not fostering them. SAC received a secondary role in 1950 by the Joint Chiefs of Staff to support the theater commander by deterring the advancement of troops, commonly referred to as the

\textsuperscript{89} Ibid, 36.  
retardation mission, which amounted to a long-range interdiction mission.\textsuperscript{91} Cannon believed the potential striking power of nuclear capable tactical fighter-bombers would release SAC from the retardation mission, allowing the strategic air arm to focus on the destruction of the enemy nation’s morale and war-making capacity.\textsuperscript{92}

Despite SAC’s resistance towards a tactical nuclear mission, the Air Staff found Cannon’s reasoning prudent. Furthermore, initial atomic delivery tests with modified B-45 light bombers and F-84E fighter-bombers produced promising results, which prompted the Air Force to accelerate development and set requirements for an operational capability. During a conference on 13 July 1951 at Air Materiel Command Headquarters, Air Force officials instructed that 41 B-45s and 107 fighters, later determined to be the F-84G, receive modification to provide TAC an atomic bomb operational capability. Air officials ordered that the force deploy to Great Britain by 1 April 1952. Moreover, TAC’s atomic project, known as Back Breaker, received a top priority, placing it just behind SAC’s Project On Top to modify B-29, B-50, B-47, and B-36 aircraft for atomic capability. The final models of the first generation of jet fighters, the F-84G, F-84F, FICON F-84, F-86F, and F-86H, would all receive modification to deliver nuclear weapons, indicating how early nuclear thinking permeated tactical air power.\textsuperscript{93}

Development of the second generation of jet fighters started before TAC received a nuclear mission; however, the success of Project Back Breaker and the preoccupation


\textsuperscript{92} Futrell, \textit{Ideas, Concepts, Doctrine}, 310-311.

with nuclear thinking infiltrated fighter design before these aircraft completed production. The Air Force initially classified the F-100 Super Sabre as a day superiority fighter, but on 4 January 1954, Air Force Headquarters directed that the F-100 should receive modification for nuclear weapon delivery. Although just over 200 of the aircraft had completed production, planners hoped the remainder would be in service by the fall of 1955. North American Aviation delivered 476 F-100Cs, the nuclear capable successor to the original F-100As. The supersonic capability and unique internal bomb bay of the F-105 showed promise for special weapon delivery. The F-105’s bomb bay, however, lacked the size necessary to carry the existing arsenal of smaller nuclear weapons. Additionally, armament and aircraft engineers confronted the issue of delivering nuclear weapons from the open bay at supersonic speeds. Until engineers could resolve these issues with future generations of special weapons, the F-105 would carry the Mk 7 atomic bomb modified for supersonic delivery.\(^\text{94}\)

The F-101 was another aircraft that experienced a shift away from its initial purpose, partially due to the appearance of the tactical nuclear mission. McDonnell Aircraft Corporation developed the F-101 as a successor to the XF-88, a fighter designed in 1946 and initially requested by SAC as a long-range bomber escort. By September 1954, however, SAC lost interest in the F-101, which McDonnell originally designed to escort the B-36 a considerably slower aircraft to its successors, the new B-52 and B-47s. The Air Council, the governing body that directs investments and execution within the Air Force, took special interest in the F-101 and directed the procurement of the aircraft based on its long-range capability in 1954, which gave it the potential of delivering

nuclear weapons on strategic targets, the only fighter to date suited for the task.\textsuperscript{95} Three other second-generation fighters joined the USAF inventory in the 1950s. The F-102 and the F-106 entered service in 1956 and 1959, respectively. These two delta-wing configured interceptors served mainly with Air Defense Command, and later, the Air National Guard. The F-102 and F-106 were the only of the second-generation jet fighters that did not incorporate a nuclear strike mission and carried out the majority of their service in the role the Air Force planned for them. The F-104, however, which also received an initial designation as an interceptor, obtained a fighter-bomber designation and incorporated the delivery of nuclear weapons.\textsuperscript{96} Four out of the six Century Series aircraft included a nuclear mission, while the other two served strictly as interceptors. Although air planners and TAC stressed the multi-purpose role of these fighters, the domination of atomic thinking pushed tactical aircraft design and the weapons of choice toward one end of the spectrum of warfare.

By the time General Weyland took command of TAC in May of 1954, nuclear priorities overshadowed conventional capabilities. Although the Air Staff directed the design of tactical aircraft to retain the ability to deliver convention weapons, the nuclear mission dominated doctrine, training, and armament and munition procurement. In 1954, only two F-86 wings received intensive atomic training and then deployed to Europe, with the rest of TAC’s forces obtaining a secondary qualification in atomic delivery. By the fall of 1955, however, atomic delivery superseded all other priorities for fighter-bomber aircrews and a comparatively limited amount of training for the delivery of

conventional ordnance. Further emphasis on atomic delivery resulted from shortages in conventional weapons and munitions, which limited aircrews from receiving experience on the gunnery range. Configuring aircraft for the delivery of weapons also complicated the balance between nuclear and conventional forces. Through 1956, conventional and nuclear weapons required different pylons and reconfiguring the aircraft from one function to the other required many hours of labor. Unwilling to compromise on the notion of a multi-purpose force, TAC rejected the suggestion of field officers to dedicate specific units to either the nuclear or the conventional mission.\textsuperscript{97}

The task of connecting and complementing the role and mission of the nuclear capable TAC with the strategic air arm and national defense policy fell to Weyland and his staff. Weyland elaborated on the ideas advanced by Ferguson concerning the “tentacles” of Communist power and the views of Cannon regarding the targets of tactical nuclear power by adding the potential for limited war on the periphery. In a lecture at the Air War College on 25 February 1955, Weyland posited the success of the strategic air force in deterring Communist leaders from starting a major war. Nevertheless, noting the obstacle facing Communist expansion by America’s nuclear air power, Weyland warned, “they are still striving for world domination, and when political and psychological means fail to achieve their timetable of expansion, they may be expected to resort to military periphery action.” Echoing the mission of the strategic air forces, Weyland stated the ability of tactical air power to meet the challenges posed by Communist aggression.

\textsuperscript{97} Schlight, \textit{Help from Above}, 184.
It would be foolhardy indeed to ignore the fact that they possess land armies numerically superior to ours, and air and naval forces second only to our own. There is, therefore, the compelling requirement that we possess the capability, and advertise the intention of quickly massing tactical air power to cope with armed aggression anywhere in the world. This is a capability which they respect and there is considerable doubt that the Communists would continue to pursue their objectives by military periphery actions in the face of such an effective challenge. I can assure you that Tactical Air Command is keenly aware of its responsibilities for the provision of adequate and modern tactical air forces capable of meeting Communist aggression whenever and wherever required.  

In order to meet Communist aggression on the periphery TAC devised the Composite Air Strike Force (CASF), a concept devised to take advantage of tactical air power’s speed and flexibility. In the winter 1956-1957 issue of *Air University Quarterly Review*, Brigadier General Henry P. Viccellio, Commander of the Nineteenth Air Force, discussed the potential of the CASF to respond to “the trouble spots of the world.” Revisiting the lessons learned in Korea, Viccellio observed the ideal conditions presented there for limited war such as the South Korean “military vacuum” and the efforts of North Korean and Chinese forces, which involved little risk for the Soviets. Understanding the unrealistic proposition of maintaining air power around the globe, the CASF’s main purpose would be to move nuclear-armed fighter-bombers to “effectively counteract the obvious Soviet policy of quick jabs at the soft spots in the Free World.” From the perspective of Viccellio and TAC, the CASF was an organic extension of massive retaliation to cover the potential of limited war.  

TAC reactivated the Nineteenth Air Force on 8 July 1955 and made it responsible for the CASF. The Nineteenth Air Force was a small operational headquarters with no

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more than 100 personnel assigned and no units under its command, its sole purpose was to plan for the deployment and employment of a CASF. If a situation developed requiring its deployment, the Nineteenth Air Force would transform into a miniature tactical air force drawing operational squadrons from other Air Forces, and only in extreme circumstances, theater forces deployed in Europe. Mid-air refueling allowed CASF to deploy in time increments measured in hours or days and its heavy airlift capability could transport the necessary supplies, equipment, and support units. Once it arrived at the trouble spot, the CASF’s fighters and fighter-bombers would have the capabilities and responsibilities of a full size tactical air force. In September of 1956, TAC tested the first partial deployment of a CASF to Europe where it participated in training exercises.\textsuperscript{100}

The CASF received its first real test in 1958 with subsequent efforts in Lebanon and Taiwan. In January of 1957, chaotic affairs in the Middle East prompted President Eisenhower to offer economic and military aid to any nation attempting to thwart armed aggression by a nation controlled by international Communism. After a military coup overthrew the pro-west government of Iraq and assassinated King Faisal II on 14 July 1958, the governments of Lebanon and Jordan feared a similar fate. President Camille Chamoun of Lebanon immediately requested military assistance from President Eisenhower.\textsuperscript{101} On the morning of the 15th, the Joint Chiefs of Staff directed TAC to dispatch CASF Bravo under the command of Major General Viccellio. The first F-100s

\textsuperscript{\textsuperscript{101} For Eisenhower’s Middle East policy see Salim Yaqub, \textit{Containing Arab Nationalism The Eisenhower Doctrine and the Middle East}, (Chapel Hill: The University of North Caroline Press, 2004).}
arrived in Turkey from Myrtle Beach, South Carolina in less than 13 hours from the Joint Chiefs directive. In less than four days, the entire CASF arrived in Turkey consisting of two F-100 squadrons, one B-57 tactical bomber squadron, and one RF-101/RB-66 composite tactical reconnaissance squadron. Additionally, the CASF airlift effort delivered 860 personnel and 202 tons of equipment from the U.S. The crisis resolved with the election of a new Lebanese president allowing for the withdrawal of American forces by October.  

Before the situation in Lebanon could resolve itself, Communist China provoked another crisis in the Taiwan Strait. Communist Chinese forces on 18 August began artillery bombardment of Chinese Nationalist forces garrisoned on the offshore islands of Quemoy and Matsu. Although the situation in Lebanon was improving, the commitment of forces to the Middle East strained American ability to respond to the crisis in the Taiwan Strait. Nevertheless, the JCS managed initially to reinforce Seventh Fleet with two additional aircraft carriers, a Marine fighter-interceptor squadron, and an Air Force fighter squadron. With Nineteenth Air Force already committed to operations in Lebanon, TAC directed Twelfth Air Force to prepare CASF Xray Tango for deployment. On 29 August, CASF Xray Tango deployed to Taiwan, but the force did not complete its arrival until 12 September. Twelfth Air Force could have hastened the arrival of the majority of aircraft to within 48 hours of receiving orders, but deliberate rest stops for crews across bases in the Pacific staggered the deployment. CASF Xray Tango consisted of a force similar to the configuration of CASF Bravo, with two F-100 squadrons, a B-57

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squadron, and two RF-101 squadrons. In addition to the CASF, TAC delivered a squadron of twelve new F-104 interceptors via C-124 transport, which ground crews reassembled in country. Before the completion of the deployment to Taiwan, Chinese Nationalist pilots flying American F-86s engaged Red Chinese MiG-15 and MiG-17 pilots in twenty-five separate encounters. The Chinese Nationalist pilots enjoyed considerable success against their rivals scoring thirty-three kills, while only losing eight of their own aircraft. Moreover, the engagements marked the first victory scored by a guided missile. The Chinese Nationalists successfully employed the American produced heat-seeking Sidewinder air-to-air missile, which claimed four victories. In early October, Communist China announced a weeklong suspension of the artillery bombardment of Quemoy. From the point of the shelling suspension onward, tensions eased and American forces returned to their permanent bases before the end of the year.103

At the conclusion of the two crises, the Air Force viewed the deployment of the CASF as a success; moreover, that American military power—mainly air power—could carry out American policy and influence events. Nevertheless, opinions varied on what lessons to derive from Lebanon and Taiwan concerning the nature of limited war and the balance between nuclear and conventional weapons. For General Thomas Power, Commander of SAC, neither ground forces nor the CASF resolved the situation, but the realization by the Communists that strategic air power inevitably backed these relatively

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small task forces. Power viewed the two crises and the American projection of power as
deterrents to both general and limited war.\textsuperscript{104} The Cold War paradigm shaped Power’s
view, as well as many in SAC and the Eisenhower administration, and fostered a belief
that the Soviet Union manipulated local aggression. Regardless of the scale or the
instigator, the primary issue resulted from the dilution of conventional capabilities in
favor of nuclear weapons.

The allure of the CASF concept for the Air Force stemmed from the
disproportionate amount of firepower provided by nuclear weapons relative to the small,
economical size of the force. In a 1965 article, Colonel Albert P. Sights Jr. evaluated the
deployment of the CASF to Lebanon and pointed out its weaknesses. The lack of
conventional capabilities was a primary concern. Sights quoted a TAC staff officer who
commented on the lack of pilot training to deliver conventional weapons in regards to the
F-100 pilots “‘none had shot rockets or delivered conventional bombs.’” The B-57 crews
were also “‘incapable of performing efficient conventional weapon delivery.” Sights also
commented on the vulnerability of the CASF, when conditions restrained the force to a
small geographic area. “Indeed they scarcely could have contrived a more inviting target
for enemy nuclear attack than by concentrating all air power resources on the exposed
forward base of Adana.” Sights continued by describing the inherent contradictions of a
nuclear strike force in a conventional setting. “On the one hand, preoccupation with the

damage our nuclear strikes could inflict on the enemy, and on the other, unwillingness to consider what his strikes might do to us.”\textsuperscript{105}

Sights noted the “disinterest in the improvement of conventional weapons,” an issue encountered by General Weyland.\textsuperscript{106} Weyland was an advocate for the nuclear capability of TAC, but he did not believe in the abandonment of conventional capabilities or training for the sake of the nuclear mission. He was concerned about the depletion of the conventional bomb inventory during the Korean War and the lack of reliability in a stockpile of aging weapons. Weyland met resistance attempting to modernize and stockpile conventional weapons. In an oral history interview he recalled a discussion with the commander of Air Research and Development Command (ARDC) who proposed “to make a very serious recommendation that no U.S. Air Force airplane be configured or be permitted to carry anything except nuclear weapons.” Throughout his command of TAC Weyland campaigned for the preservation of conventional weapon capabilities and warned the Air Force about the potential of future limited wars similar in scale and nature of Korea. Moreover, he warned that the failure to maintain a conventional tactical capability would present an opportunity for the Marines, the Army, or the Navy to usurp the mission.\textsuperscript{107}

Weyland’s warnings were not without merit. The Army grew more worrisome as they witnessed the dissolution of TAC’s conventional capabilities. The inability to agree on air-ground procedures, the perception of TAC’s apathy for providing close air support,

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\item \textsuperscript{105} Col. Albert P. Sights, Jr., “Lessons of Lebanon: A Study in Air Strategy,” \textit{Air University Review}, Volume XVI, No. 5 (July-August 1965), 42.
\item \textsuperscript{106} Ibid, 42.
\item \textsuperscript{107} \textit{U.S. Air Force Oral History Interview: Gen O.P. Weyland}, 254-256.
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and the dominant position of nuclear weapons delivery drove the Army to seek its own tactical air capabilities. By 1955, Army officers had openly refuted the Air Force’s concepts and doctrine regarding tactical air support as well as the weapon systems programmed for the role. In an article in the July 1955 issue of *Military Review*, Colonel Jules E. Gonseth, Assistant Commandant of the Army Aviation School, criticized the Air Force’s definitions of “strategic” and “tactical” as too broad, which became particularly problematic in the realm of close air support. He noted that the Air Force’s definition of tactical “is almost anything in the way of airpower that is not a part of the strategic air command.” Gonseth argued that the nature of close air support and the weapons systems required to perform it were more dissimilar than other tactical air missions such as air superiority and interdiction were and deviated farther away from TAC’s concept than air commanders were willing to admit. Gonseth rehashed early arguments of placing tactical air units directly under the control of ground commanders, a concept that was anathema to the Air Force. Additionally, he contested the long-standing position of the Air Force that small; light aircraft used for close air support could not survive over the battlefield by citing the use of liaison aircraft for artillery spotting and courier duty. In his conclusion, Gonseth recommended that, “the Army should exert, vigorously, every effort at high level to obtain, from the Air Force, satisfaction of the request for the quantities and control of close air support required to support ground units engaged in combat and should amend the doctrine accordingly.” If the Air Force failed to meet these request, Gonseth advocated seeking to amend previous agreements “and proceed with plans to provide its own organic close air support.”

Gonseth’s article reflected the opinion of many but not all Army officers. A few months after the appearance of Gonseth’s article, Colonel T.N. Dupuy, an artillery officer published an article in *Air Force Magazine* that disputed Gonseth’s views. Dupuy did not believe that the Air Force’s stance on control of the air violated any standard of the unity of command. He noticed that the Army did not give local infantry commanders’ control of non-infantry artillery and reasoned that this principle was no different from the Air Force’s position. Furthermore, Dupuy understood the Air Force placing the air superiority mission in front of air support, which parroted Army doctrine regarding the security of forces. Moreover, the need to achieve air superiority remained a priority regardless of which service controlled air support since those aircraft would make attractive targets for enemy air attack. Dupuy also contested the Army’s argument for cheaper, more maneuverable, single purpose aircraft observing that even if friendly forces achieved air superiority modern antiaircraft artillery posed a significant threat to slow, low-altitude aircraft.\(^{109}\)

Dupuy and Gonseth’s views represented the polarization of the topic of air support within the Army. The more moderate officers like Brigadier General John Dahlquist, commander of Continental Army Command leaned towards Dupuy’s opinions and believed the Army’s place was still on the ground. Although these officers thought the Army should not invest in developing their own air support assets, they did favor acquiring operational control of supporting aircraft. A more radical approach emerged from a cadre of young officers who pushed the Army to possess its own organic air

support. \textsuperscript{110} The latter group found an advocate for their position in General Maxwell Taylor.

Taylor succeeded General Matthew Ridgway as Army Chief of Staff in 1955 after Ridgway’s overt criticism of President Eisenhower’s New Look policy led to retirement after only one term as Army Chief of Staff. Taylor was also a critic of the New Look, and like Weyland, believed the services needed to maintain resources to fight conventional and limited wars. Taylor’s ideas culminated in the strategy of Flexible Response, a concept that offered a wider range of options “to react across the entire spectrum of possible challenge.” \textsuperscript{111} The Eisenhower administration started to shift away from the strategy of Massive Retaliation to Flexible Response in 1957, but it would not become national strategy until John F. Kennedy’s presidency. \textsuperscript{112} Although Taylor and Weyland agreed on many points concerning the potential for a wider spectrum of war, fundamental service differences prevented closer cooperation. In Taylor’s view, the Air Force had defaulted on their promise of continued support since achieving independence in 1947. Furthermore, the Air Force had manipulated the Army’s reliance on its support forcing the service to accept the Air Force position on issues like air-ground support procedures, air resupply, and control of air space over the battlefield. Taylor claimed that inadequate levels of support, incompatible doctrine, and the inability of high-performance jet fighters to provide the required support justified the removal of restrictions on the size and weight of aircraft allowed for Army aviation. \textsuperscript{113}

\textsuperscript{110} Schlight, \textit{Help from Above}, 195.
\textsuperscript{112} Trauschweizer, \textit{The Cold War U.S. Army}, 120-133.
\textsuperscript{113} Ibid, 168-170.
General Taylor took advantage of ambiguous language in several of the services agreements to advance the prospect of Army aviation. President Truman’s executive order that followed the National Security Act in 1947 specified “air support of ground forces” as a function of the Air Force. Later, the Key West Agreement further defined the role.\textsuperscript{114} Several agreements and memorandums followed the executive order in the late 1940s and through the 1950s that specified and limited the functions of Army aviation and placed weight restrictions on fixed-wing and rotary aircraft.\textsuperscript{115} Despite Secretary of Defense Charles Wilson’s attempts to clarify the services roles, each one left room for the Army to press the issue. Shortly after Taylor’s retirement in 1959, his successor, General Lyman Lemnitzer, directed his operation staff to develop a plan to assume the mission of air support to allow the Army to perform its primary role at its highest efficiency. The plan utilized a two-part report called the “Tactical Air Support Feasibility Study,” which reviewed all the functions of tactical air support and condemned the efforts of the Air Force. Pointing at the Air Force’s preoccupation with nuclear capability, the Army’s report claimed that the Air Force would no longer be able to provide tactical air support by 1965. The study elaborated on a number of complaints Army officers had voiced throughout the 1950s. It observed that none of the current Air Force aircraft met the criteria for close support and each aircraft had notable deficiencies in agility and the ability to perform at low-speeds. Additionally, the F-86, F-100, and F-105 all required lengthy runway requirements. The report noted that while the Air Force

\textsuperscript{114} Wolf, Basic Documents on Roles and Missions, 90, 163.  
had no plans to procure a single-purpose close air support aircraft, the Navy had
developed several subsonic aircraft suited for the role. Drawing again from the lessons of
Korea, the Army criticized the lack of number of sorties provided for air support and
perceived it as the Air Force’s lack of interest as well as tentativeness to utilize expensive
aircraft for the mission. The report also called for the direct command and control of air
support aircraft by the ground commander and concluded that the Army should assume
all tactical air responsibilities, except those necessary for interdiction.¹¹⁶

The Tactical Air Command that exited the 1950s barely resembled the
organization that had entered the decade as an operational headquarters. Advances in
technology and a shift in national defense policy contributed to the direction of TAC’s
modernization. These developments, however, also contributed to the degradation of
conventional tactical air capabilities that called into question TAC’s ability to perform its
traditional roles. Although the Eisenhower administrations New Look policy emphasized
the delivery of nuclear weapons and narrowed the spectrum of potential warfare, other
factors contributed more to TAC’s development in the 1950s. First, TAC officer’s recent
memory of the reduction from a major combat command influenced their decisions.
Whether it was the pursuit of a nuclear mission or debates with the Army concerning air
support, TAC officers moved toward solutions they perceived to ensure their commands
long term survival, namely the nuclear mission. Ironically, those decisions obscured the
previously distinct nature and character of tactical air power. Instead of removing itself
from the shadow of the Strategic Air Command, TAC became its extension. Second, the
appeal of technological answers and overwhelming firepower swayed decisions involving

the procurement of weapons and aircraft, evident in the Century Series. Speed and altitude translated to survivability for the Air Force and particularly TAC. As noted by Colonel Sutterlin high performance came with a high price tag, which limited the number of aircraft the Air Force could obtain, and consequently, the variety. Considering the potential of the tactical nuclear weapon, however, in the eyes of officers like General Viccellio, firepower could make up for the shortcomings in versatility, and do so more economically. Nevertheless, the seduction of technology and nuclear weapons damaged TAC’s relationship with the Army who began seeking their own solutions to tactical air support.

Lastly, the strict adherence to the concept of the indivisibility of air power further damaged TAC’s relationship with the Army and influenced decisions concerning concept, doctrine, and technology. The Air Force’s unwillingness to accept influence or criticism from beyond its own ranks is evident in the dogmatic acceptance of this rule. Furthermore, it was largely up to TAC to defend the principle. SAC was virtually impervious to criticism due to its mission that would often take it far from the battlefield, but TAC had to work more closely with the other services, especially within the theater of war. The Century Series was the physical representation of TAC’s interpretation of the indivisibility of air power. Air Force commanders such as General Cannon envisioned multi-purpose aircraft capable of covering the entire spectrum of warfare and insisted it was the best, and most economical, means of meeting the needs for the Army and the Air Force alike. Nevertheless, as pointed out by the Army and later evident in Southeast Asia, the second generation of jet fighters was limited and lacked the versatility
the Air Force had advertised. The Century Series represented the mark where American forces attempted to shape the next war to the weapon instead of the weapon to the war. Additionally, the fact that the Air Force had these aircraft in development, in the testing phase, or nearing delivery before tactical nuclear weapons had become a reality indicates that the New Look carried less influence over TAC’s development than other factors.

Although the New Look and the strategy of Massive Retaliation carried less influence than other factors, TAC shared the tunnel vision caused by a reliance on nuclear capability and deterring the Soviet threat. General Weyland cautioned other Air Force leaders and policy makers about the potential of limited war and the necessity of maintaining conventional capabilities, as did General Ridgway. Nevertheless, the Air Force proved itself rigid, clumsy, and stubborn when it came to correcting its course, particularly in regards to technology. During a lecture to the Army and Navy War Colleges in 1954, Colonel Marvin Zipp discussed how the Air Force tracked trends in technology and could project future needs. Zipp used the B-47 bomber as an example. He described how the aircraft moved from the conception of a requirement in 1945 to a final operational product in 1952, a period of seven years. Based on his example Zipp stated, “it’s not too difficult to look ten years ahead in the hardware business because we are generally dealing in established and predictable technological trends.” Predicting the “world scene,” however, presented problems. “Here the intriguing mathematical situation exists of all variables and no constants. It’s like trying to forecast which flower a drunken butterfly is going to land on.”

117 Although no constants may have existed,
several events should have informed Zipp’s world scene, most notably the French-Indochina war, and the crises in Lebanon and Taiwan. No one could predict where the drunken butterfly would land, but it was possible to determine what type of flower it would choose.
CHAPTER 3: THE DRUNKEN BUTTERFLY LANDS IN VIETNAM

In January 1961, John F. Kennedy became president of the United States amid several crises that further strained America’s relationship with the Soviet Union. Prior to President Kennedy’s election, in May 1960, a U-2 reconnaissance aircraft was shot down over Soviet territory, exposing America’s breach of international law and embarrassing the Eisenhower administration. On the heels of Kennedy’s inauguration, on 17 April 1961, a CIA sponsored counter-revolutionary, paramilitary group invaded Cuba and suffered a crushing defeat at the hands of Fidel Castro’s armed forces. The attempted invasion pushed Castro to strengthen ties with the Soviet Union. General Taylor returned from retirement at the request of the President to study the Bay of Pigs invasion, later, Kennedy appointed him as Chairman of the JCS. The influence Taylor enjoyed over Kennedy induced a reversal in the policy of overwhelming nuclear superiority in favor of the General’s Flexible Response. Taylor designed Flexible Response to bring more influence to the Army by incorporating tactical nuclear weapons and emphasizing the deterrent capability of surface forces. Although Taylor crafted the program for use in Europe, Kennedy interpreted the strategy as a means to conduct limited war across the globe. Regardless of its multiple interpretations, Flexible Response would loosen the grip the Air Force maintained on the defense budget and force Strategic Air Command to share influence.¹¹⁸

The Air Force had risen to the height of its influence in the early 1960s and the shift in national defense policy would largely come at its expense. Strategic Air

¹¹⁸ For more on the adoption and interpretation of Flexible Response see Trauschweizer, The Cold War U.S. Army, 120-133.
Command was the stationary body around which all other commands orbited, moreover, the Air Force believed SAC was the centerpiece for all of the services. The champions of the strategic nuclear mission would not concede the belief that nuclear superiority prevented limited war nor were they willing to invest further into means to fight limited wars. Officers of SAC and General LeMay, who was now Air Force Chief of Staff, believed American nuclear superiority resolved the Cuban Missile Crisis in October 1962. Nevertheless, conflict in Southeast Asia would expose the inflexibility of Air Force doctrine and reveal the services problems in adapting existing technology to fight at the opposite end of the spectrum in which it had prepared.  

Despite the rigid thinking within the upper levels of the Air Force hierarchy, a group of younger officers would improvise means to give the Air Force a capability to conduct counterinsurgency operations and enhance close air support firepower. Their efforts culminated with the creation of the fixed-wing gunship. Although well received by the personnel it supported and the aircrews who operated it, the gunship concept met resistance from high-ranking Air Force commanders early on in its development. Additionally, experimentation with the gunship’s role in Southeast Asia would result in the loss of aircraft and aircrews to the enemy’s anti-aircraft weapons. Despite the rigidity of Air Force doctrine, development, testing, and adoption of the fixed-wing gunship proved the USAF possessed an ability to incorporate ad hoc solutions.

The installation of Flexible Response as the new national defense policy pressed the Air Force to deemphasize long-range bombers in favor of theater aircraft and

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conventional weapons. The new emphasis on the Army and the introduction of attack helicopters prompted the Air Force to expand TAC or else risk losing the close support mission. Moreover, the new Secretary of Defense Robert McNamara asserted that the Navy and the Air Force share as much aviation technology and hardware as possible. The first challenge to the Air Force came when McNamara suggested the Air Force acquire the Navy’s A-4D Skyhawk to replace the F-105. McNamara favored the low-cost, lightweight single-engine aircraft as a common fighter, but thoughts on tactical aviation differed between the two services. TAC desired a replacement for the F-105 that would retain the same characteristics as the current fighter-bomber with the inclusion of some improvements. TAC sought an aircraft capable of achieving Mach 2.5, possessed an internal bomb bay for nuclear weapons, and the ability to operate from semi-prepared airfields in Europe. The Navy, on the other hand, sought a carrier-based, fleet-defense strike fighter. The Air Force and the Navy attempted joint development of a tactical fighter, known initially as the TFX (Tactical Fighter Experimental), and later designated the F-111. Technical issues such as engine problems created delays and cost overruns with the F-111. The Navy bowed out of the project noting that the aircraft was too large and heavy for carrier operations. The Air Force first used the F-111A in operations in Southeast Asia in 1968, but the aircraft saw limited action in Vietnam due to more technical issues. In the interim, at the end of 1961, LeMay managed a compromise with McNamara by choosing the Navy’s F-4 to replace the F-105.\textsuperscript{120}

Regardless of which aircraft the Air Force procured, the service proved it would follow the trends from the previous decade and seek high performance fighters to fill its needs. Additionally, planning for the next generation of tactical aircraft still focused on combating the Soviet Union in Europe. A small group within the Air Force, however, turned their attention towards the situation developing in Southeast Asia and applied their skills to form solutions to address limited war. Ralph E. Flexman, an Assistant Chief Engineer with Bell Aerosystems in the early 1960s, became interested in the issues of limited war and counterinsurgency after working on several Bell contracts involving the problem. Flexman’s solution entailed installing weapons to face out of the side of the aircraft. This would allow the aircraft to stalk its target in a left-banking circle called a pylon turn, which would keep the weapons aimed on target and delivering munitions for as long as necessary.\textsuperscript{121}

Flexman continued to refine the concept and shared his ideas with the Behavioral Science Laboratory and Aerospace Medical Research Laboratory (AeroMed Lab) at Wright-Patterson Air Force Base. Captain John C. Simons, a research psychologist and pilot at the AeroMed Lab, took an interest in Flexman’s research. By May of 1963, Simons began to press for testing of this concept by forwarding Flexman’s research to offices interested in limited war and counterinsurgency at Wright-Patterson. At this point, the concept began to meet resistance. Weapons and ballistics experts refuted the concept, calling into question the ballistics of side-fired munitions. Nevertheless, Flexman and Simons believed the only way to verify or disprove the concept was with

live fire tests. Simons finally managed to gain enough support for a few test flights to establish sighting techniques and skills in June of 1963. Captain Simons commenced test flights piloting a T-28, a small, single-engine, trainer aircraft. Using a crosshair drawn on the left side of the cockpit’s canopy, Simons easily managed to track targets and hold them within the rudimentary sight while performing the pylon turn. The tests progressed to moving targets, and again, Simons could fix trucks in the sight moving parallel and at various angles to the position of his aircraft.\textsuperscript{122}

The project gained some attention within Air Materiel Command and Simons’ superiors permitted continued tests, supplied a small part-time team for assistance, and allowed access to a C-131B cargo aircraft for further sight testing. Nevertheless, the project had not yet received approval for live fire tests and minimal progress occurred over the next year, due in part to the limited availability of resources as the U.S. increased its involvement in Vietnam. By the summer of 1964, Captain Simons’ other duties forced him to pick a project lead replacement. Concurrent with this development, the project pilot assignment shifted with Captain Ronald W. Terry finally assuming the role.\textsuperscript{123} The arrival of Captain Terry proved beneficial to the gunship’s development and possibly prevented its demise.

Terry had served as a fighter pilot for four years and flew F-86s during the 1950s. In 1963, Terry toured South Vietnam for six weeks as part of an Air Force Systems Command team. The team assessed problems involving the war environment in Southeast Asia and proposed solutions in the form of new hardware. As a fighter pilot,

\textsuperscript{122} Ibid, 19-21.
\textsuperscript{123} Ibid, 25.
Terry understood the issues of delivering ordnance with tactical aircraft and realized the combat environment in Southeast Asia would further complicate the issue. Poor weather, mountainous terrain, and a jungle canopy able to conceal the enemy created enough issues for pilots to face. However, pilots also had to confront the tight tactical situation and contend with delivering munitions dangerously close to friendly troops in contact with the enemy, where “artillery, bombs, and napalm proved too devastating.” Terry managed to gain further approvals for testing and by August 1964, flight-testing included the installation of small caliber guns.\textsuperscript{124}

The Air Force’s Aeronautical and Systems Division and the AeroMed Lab selected the General Electric SUU-11A gun pod for live fire tests. The SUU-11A Gatling gun could fire up to 6,000 rounds of 7.62-mm ammunition per minute. Crewmembers installed two gun pods in the cargo door of the C-131B transport for tests. Captain Terry performed a series of live fire tests, varying the aircraft’s altitude from 500 to 3,000 feet and speed from 115 to 250 knots. Terry fired on small ground level targets including a ten-foot-square raft over Eglin AFB’s water range as well as a number of mannequins. The firing tests exceeded expectations and garnered the attention of the First Combat Application Group, an office at Eglin that adapted equipment and tactics for counterinsurgency operations.\textsuperscript{125}

The First Combat Applications Group approached Captain Terry about the feasibility of installing gun pods on other aircraft, specifically the C-47. Terry and his team accepted the challenge, and fire tests with the C-47 produced results similar to those


\textsuperscript{125} Ballard, Development and Employment of Fixed Wing Gunships, 28.
for the C-131. The C-47 had served the Air Force for more than 20 years. Adapted from the Douglas DC-3 commercial airliner, which first appeared in 1936, the C-47 had become a mainstay in the Army Air Corps by World War II. It performed in a variety of roles from personnel and cargo transport to towing troop-carrying gliders and dropping paratroopers. C-47s participated in the Berlin Airlift and remained a workhorse for the Air Force into the 1960s. The C-47 had a strong upside for adaptation to the gunship. Still readily available with crews to serve it, the aircraft could sustain a considerable time on target; the large cabin could store an ample supply of ammunition and facilitate a crew to service the guns while engaging the enemy. However, critics quickly pointed out several disadvantages to the large aircraft, the slow moving transport could be vulnerable to ground fire or interception from enemy fighter aircraft. Even small-arms fire could prove dangerous to the aircraft, as the initial operating altitudes would put it well within their range.

Captain Terry still believed the advantages far outweighed the drawbacks. His experience as a fighter pilot reinforced his belief that no other tactical aircraft could deliver ordnance with the precision of the gunship. He knew fighter aircraft munitions like rockets, bombs, and napalm would destroy hamlets and forts, which would require aid to rebuild. Additionally, he believed the gunship could operate at an altitude above the range of small arms.

Captain Terry continued to pitch the weaponized C-47, which finally resulted in permission to present his findings to General Curtis LeMay, Air Force Chief of Staff on 2

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November 1964. By the time Captain Terry met with Gen. LeMay, the situation in Vietnam had worsened. By the spring of 1964, Communist forces seemed to have the momentum as hamlet and villages fell under their control in South Vietnam. Troop morale was low among South Vietnamese soldiers and U.S. military advisors called into question their ability to repel Viet Cong and North Vietnamese forces. Terry had planned to deliver a presentation that focused on the gunship’s capability of attacking the Vietcong; however, while he waited to give his presentation, he listened to the troubling intelligence briefing Gen. LeMay received. The briefer described a recent mortar and sapper attack by Viet Cong on Tan Son Nhut Airbase near the city of Saigon. The briefer explained that the attack resulted in the death of U.S. personnel and the loss of several A-1 Skyraider attack aircraft. Terry noticed Gen. LeMay’s growing agitation as he received the briefing and decided to use it to his benefit. When the intelligence briefing closed Terry opened his presentation by saying, “General LeMay, I’m here to brief you on a new concept for air base defense in Vietnam.” Captain Terry’s improvisation paid off. He grabbed the attention of Gen. LeMay and received authorization for combat testing in South Vietnam. The Air Staff began informing the necessary commands of the combat tests to prepare for Terry and his team’s arrival.

Captain Terry arrived in Vietnam on 2 December 1964, ready to commence tests. By the end of his first week in South Vietnam, the needed components to modify in-country C-47s arrived. This equipment included the SUU-11A gun pods with a mounting

kit, a modified 16mm camera viewfinder with crosshair reticle to serve as a gun-sight, and other ancillary components. Enough equipment arrived in working order to modify two C-47s. As the aircrafts received their modifications, Captain Terry introduced the gunship concept to aircrews from the First Air Commando Wing. Members of the First ACW had flown the C-47 in support of special operations in Southeast Asia for several years, their experience with the aircraft, knowledge of the battle environment, and familiarity with counterinsurgency operations made them excellent candidates for this project. The newly modified aircraft first received the designation FC-47 due to the tactical nature of their mission. Captain Terry’s student aircrews mastered the skills of sighting, targeting, and firing the FC-47’s weapons within a few flights. Captain Terry piloted the first combat sortie on 15 December 1964, working with a forward air controller, Terry and his crew fired on sampans, buildings, and trails as he familiarized himself with counterinsurgency operations and rules of engagement.  

The fixed wing gunship concept arrived at a combat test phase due to the efforts of three men in particular, Flexman, Simons, and Terry. Walter Flexman did not invent the concept of side-firing weapons; others had experimented with the idea since World War I. Nevertheless, Flexman presented the most comprehensive proposal. Perhaps by good fortune, Flexman’s concept caught the attention of Captain John C. Simons who became the next champion. Although a research psychologist, Simons could see the potential in the gunship and had enough connections to get a project started. This leaves Captain Terry, possibly the most important person in the long-term development of the gunship. Each of these men had taken a special interest in counterinsurgency operation

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131 Ibid, 37.
and each provided a unique perspective. Nevertheless, Terry’s persistence and
salesmanship skills helped the project gain ground and he made sure the right people
noticed it. Furthermore, Terry’s participation in missions and his role as an instructor by
training new crews supplied consistency through the gunship’s test phase and early
adoption.

The early adoption of the fixed-wing gunship by special operation wings also
played a role in its initial success. Special operations can include a variety of missions
and personnel, but generally, these operations entail the use of highly skilled individuals
in force numbers smaller than conventional units, which can operate in any environment
and utilize improvisation and self-reliance. For the USAF, special operations included a
close relationship with U.S. Army Special Forces and supporting their missions on the
ground.

Starting in 1961, the U.S. Army Special Forces trained, advised, and supported
paramilitary forces in South Vietnam, and conducted long-range reconnaissance patrols.
As U.S. involvement in Vietnam escalated, Special Forces assumed a larger role that
included overt missions against the enemy.132 Regardless of the type of mission, the
majority of Army Special Forces operations involved a counterinsurgency aspect, which
occurred in rural areas that required aircraft for logistics and fire support. Throughout
1963, Vietcong attacks on hamlets and forts increased in frequency and aggressiveness.
Additionally, VC night attacks became more coordinated and effective. As a result, air
support teams increased their activity and number of sorties. Initially, the Forty-four

132 Kenneth Sams and Lt. Colonel Bert Aton, USAF Support of Special Forces in SEA, (San Francisco HQ
PACAF: Directorate of Operations Analysis, CHECO/CORONA Harvest Division, 1969), 1. For more on
Hundredth Combat Crew Training Squadron took on the support role, which became the First Air Commando Wing in June of 1963. The Forty-four Hundredth CCTS and First ACW inventory consisted almost entirely of World War II aircraft, including the C-47, which performed a variety of roles from logistics support to dropping flares. For fire support, Air Force Special Operations relied on the B-26 bomber, the AT-28, and the A-1E Skyraider.¹³³ The FC-47 would become a welcomed addition and an impressive increase in firepower for the aircrews of these aging aircraft.

By the end of February 1965, the FC-47 garnered support for continued development by impressing troops on the ground and the commanders monitoring the evaluation period. In its initial test phase, insurgents broke off every attack against outposts when they received fire from the FC-47. The presence of the gunship also boosted the morale of hamlet and fort defenders.¹³⁴ Before the end of the evaluation period, commanders started to make plans for the continued use of the FC-47 in South Vietnam. Early test results so impressed General Joseph H. Moore, Commander of Second Air Division, responsible for tactical aviation in Vietnam, that he requested a squadron of FC-47s delivered as soon as possible. General James Ferguson, Commander of Air Force Systems Command, seconded the request.¹³⁵ Initial tests proved promising enough to cancel a program to arm the A-1E Skyraider with the 7.62-mm miniguns. The Skyraider, another, venerable aircraft, underwent an evaluation in South Vietnam from July to December 1964 to determine its effectiveness as an airborne alert aircraft in

¹³⁴ Ballard, Development and Employment of Fixed Wing Gunships, 22.
¹³⁵ Ibid, 37-45.
defense of forts under night attack. The Gatling gun armed Skyraider produced impressive results, but it could not compete with the accuracy of the lateral-firing system of the gunship.\(^{136}\) The combination of the Skyraider and gunship projects had a secondary benefit by providing an effective combat test of the SUU-11A miniguns. The tests showed the relatively new weapon was accurate and easy to maintain and load with few malfunctions. A final evaluation report remarked on a few issues and suggested measures to improve cooling and extend the life of the weapon.\(^{137}\)

The evaluation period of the FC-47 did reveal several issues that would require attention. Illuminating targets at night posed a problem. Flares still provided the best means, but often caused secondary fires that ignited wooded areas, structures, and rice stacks. These secondary fires occasionally confused pilots in determining the location of forts or enemy targets. The Air Force experimented with several alternatives including special ordnances that would cover the target area with chemical luminescent and high-powered spotlights. None of the alternatives provided enough illumination or a practicality of use. The problem of small arms fire also appeared in initial tests. The operating altitude of 3,000 feet did protect the aircraft in most cases, but occasionally a round would cause damage. In one instance, a bullet that had depleted nearly all of its kinetic energy penetrated the hull and struck a crewmember in the heel, but failed to cause any injury. Nevertheless, small arms fire remained enough of a concern to warrant the installation of armor plating in updated versions.\(^{138}\)


\(^{137}\) Ballard, *Development and Employment of Fixed Wing Gunships*, 44,45.

\(^{138}\) Ibid, 41-46.
By the end of the test phase, the continued use of the C-47 also came into question. The C-47 possessed many positive qualities, but the evaluation teams discovered its limitations. The final evaluation report advised an upgrade to an aircraft with more power, larger payload, and greater cargo capacity, evaluators suggested the C-131. Although evaluators and commanders discussed the deficiencies of the aircraft and the need for improved equipment, the gunship concept had proven a worthwhile project that warranted more attention and investment. The test results produced various responses. General William Westmoreland, Commander of Military Assistance Command Vietnam, requested an acceleration of the program, but others would resist the gunship’s implementation. General Walter Sweeney, Commander of Tactical Air Command, had a much less favorable response to the gunship concept for several reasons. First, like other detractors, Sweeney believed the slowing moving C-47 would prove far too vulnerable in a battlefield environment. Second, he feared that arming transport aircraft would set a precedent for the Army to continue experimenting with arming its Mohawk planes. Lastly, Sweeney believed that even if the gunship proved successful in Southeast Asia, its adoption into the Air Force inventory could prove disastrous in another conflict. General LeMay installed Sweeney as commander of TAC in October 1961 as General Frank F. Everest’s replacement. Sweeney was a disciple of LeMay and possessed a background in strategic bombing; his appointment was a political move to align the command further with SAC. Ironically, General John P.

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139 Ibid, 46.
McConnell overruled Sweeney’s objections to the gunship. McConnell became Air Force Chief of Staff in February 1965, another protégé of LeMay.¹⁴¹

The Joint Chiefs of Staff and the Secretary of Defense approved plans for the first gunship squadron on 13 July 1965. The plans called for modification of twenty-six C-47s to FC-47s. The availability of the C-47 became the largest determining factor in its continuing use. Other suitable aircraft like the C-131 and C-130 were in high demand during the escalation of U.S. involvement in Vietnam, and Air Force Logistics Command and Air Force Systems Command could not pull enough of these aircraft out of their roles for modification. Plans called for the completion of modifications by 7 November 1965 and deployment to South Vietnam by 9 November.¹⁴² The months in between involved a flurry of activity and improvisation to ready the crews and aircraft.

The new unit, known as the Fourth Air Commando Squadron, arrived at Tan Son Nhut Air Base, outside of Saigon on 14 November 1965 with the FC-47s renamed as the AC-47 Spooky. The Seventh Air Force stated the mission of the Fourth Air Commando Squadron was, “to respond with flares and firepower in support of hamlets under night attack, supplement strike aircraft in defense of friendly forces, and provide long endurance escorts for convoys.”¹⁴³ In order to fulfill their duties, General Hunter Harris, Commander in Chief of Pacific Air Forces decided to split the sixteen aircraft squadron into fourths, allowing four aircraft each to support the four military corps areas of South Vietnam. Da Nang, Pleiku, Nha Trang, and Binh Thuy would serve as forward operating

bases with Tan Son Nhut remaining the main base of operation. However, before the squadron elements could complete their move, four of the gunships received orders to report to Udorn Royal Thai Air Force Base, Thailand to support interdiction missions over the skies of Laos. Harris sent the gunships to enhance Operation Barrel Roll, a covert aerial campaign aimed at disrupting the Democratic Republic of Vietnam’s (North Vietnam) logistical support of insurgents operating in South Vietnam. The campaign’s effort concentrated on the logistical corridor known as the Ho Chi Minh Trail, a complex system of roads and trails that wound through Laos and Cambodia and exited at several points in South Vietnam. The Air Force and the Navy sustained Barrel Roll until the end of U.S. involvement in the war and expanded the campaign to include close air support.\(^{144}\)

At the order of U.S. Ambassador to Laos, William H. Sullivan, four AC-47s and five crews began assisting in the covert aerial interdiction effort in southeastern Laos known as Operation Tiger Hound in late February of 1966. By the end of March, an effective system developed to destroy trucks along the Ho Chi Minh Trail. Over the course of one night, two gunships flew armed reconnaissance sorties searching for supplies moving along the trail. Each sortie lasted approximately six hours overnight to cover the period of darkness. During these sorties, the AC-47s made radio contact with hidden ground reconnaissance teams, which would then direct the gunship towards truck traffic. Once the gunship arrived at the location of the reported truck traffic or detected a

target, it would drop flares to illuminate the area, spot its target, and begin firing from an orbit around the vehicle. In addition to its strike capabilities, the gunship often served as a forward air controller in the skies over Laos, directing attacks for a variety of tactical aircraft. Nevertheless, the interdiction missions would expose the AC-47’s limitations. Heavier antiaircraft (AA) fire, mountainous terrain, poor weather conditions, and resilient targets revealed the need to upgrade firepower and find a suitable replacement for the aging cargo aircraft.145

The enemy countered the AC-47s’ initial successes with a tenacious effort to repair roads and damaged vehicles or remove destroyed vehicles to resume their logistics operations along the trail. Moreover, the enemy increased air defenses, which included the 37-mm antiaircraft gun. The increased range of the improved air defenses produced far deadlier firepower than the gunships encountered in the skies over South Vietnam and resulted in the loss of four AC-47s within a six-month period.146 With such a limited number of gunships operating in Southeast Asia, the losses prompted a reassessment of their role in the interdiction mission. The Fourth Air Commando Squadron’s commander requested a redeployment of the gunship force stationed in Thailand. The request cited the AC-47s vulnerability to the improved air defenses, the difficulty in operating the aging aircraft over rugged terrain, and the increasing need for air support in South Vietnam for hamlet and fort defense. Pacific Command and the seventh Air Force

146 Nalty, The War Against Trucks, 54.; Tilford, Setup, 176. For more on North Vietnamese efforts to maintain logistics operations see Prados, The Blood Road.
approved the redeployment and by the end of August, all AC-47s had departed from Thailand.147

Beyond the weaknesses cited in the redeployment request, aircrews and ground teams discovered several other deficiencies in the current gunship version while operating in both Laos and South Vietnam. Although the 7.62-mm miniguns proved effective against troops in the open, the relatively small round lacked destructive power against troops protected by cover. The armaments also struggled with destroying trucks on the Ho Chi Minh Trail. In addition to the lack of firepower, target acquisition at night proved problematic in certain situations. In remote areas with no visible ground lights, pilots had to rely on ground controllers to guide them to the target. Complicating the matter, friendly ground forces often lacked a means of marking their position in relation to the target with some form of illumination. In other situations, gunships could not drop flares at risk of exposing friendly forces to the enemy.148

Gunship crews experimented with solutions to these problems. While commanding a support mission over Laos, Major George W. Jensen effectively used a starlight scope to spot targets while supporting Royal Laotian forces defending the city of Attopeu on the night of 4 March. The starlight scope enhanced images by intensifying reflected moonlight and starlight. Crews also tested .50-caliber machine guns as a more

147 Nalty, The War Against Trucks, 61-62.
effective truck destroyer. Further tests of the starlight scope and .50-caliber machineguns were postponed, however, when the test gunship was shot down over Laos.\footnote{Ballard, \textit{Development and Employment of Fixed-Wing Gunships}, 53-67.}

Even though limitations to the AC-47's abilities began to manifest, its demonstrated value as a counterinsurgency weapon system led to expansion of the fleet operating in Southeast Asia. Continuing to serve in its role as a defender of forts, hamlets, and air bases, it also played a significant role in major operations such as the defense of Saigon and Khe Sahn during the Tet Offensive. The USAF built fifty-three AC-47s before discontinuing its use at the end of 1969. The USAF transferred many of the progenitor gunships to the Air Forces of Thailand, Laos, and the Republic of Vietnam where they continued to operate against Communist forces for the remainder of the war.\footnote{Ibid, 97, 98.}

During its testing and initial adoption phase, the AC-47’s promising results received enough attention and praise to plan for development of a more sophisticated lateral-firing gunship system. General Gabriel Disosway, who replaced General Sweeney as commander of TAC in July 1965 called the AC-47 “one of the most responsive and effective weapon systems devised to provide on-call sustained firepower for the ground force commander.”\footnote{Senate, \textit{U.S. Tactical Air Power Program: Hearings before the Preparedness Investigating Subcommittee of the Committee on Armed Services United States Senate}, 90th Congress, 2nd Session, 1968, 86.} Disosway’s statement represents a considerable change in opinion on the gunship from the previous TAC commander. The desire to find a replacement for the AC-47 coincided with the Air Force’s need to enhance their night attack capabilities. The Vietcong and North Vietnamese took advantage of the night hours, rough terrain,
and dense jungle foliage to cover their movements and hide supplies and vehicles. In 1966, the USAF initiated Operation Shed Light, an ad hoc development program to address the shortcomings in nighttime operations. The program focused on integrating improved navigation, illumination, and target acquisition equipment with weapons and aircraft suitable for all-weather and night operations. Out of one of the proposals under Operation Shed Light grew the follow-on project to the AC-47, known as Project Gunship II.  

The proposal for Project Gunship II was the brainchild of now Major Terry and Major James R. Wolverton. After receiving approval for the project, Air Force Systems Command picked the C-130A as the test vehicle and delivered one to Wright Field in April of 1967. The C-130 possessed many of the qualities suggested by Major Terry, and others familiar with the AC-47, to improve the fixed-wing gunship’s capabilities. Among those qualities were four turboprop engines to provide the needed power to operate in the challenging physical geography of Southeast Asia. Additionally, an increase in compartment size and payload allowed the aircraft to carry more equipment, ammunition, and heavier weapon systems. The airframe design also included a benefit. The AC-47 consisted of a low-wing configuration, which meant the wing attached to the fuselage at the bottom of the aircraft and created problems with gun mounting and visibility. The C-130, however, had a high-wing configuration, which attached at the top of the aircraft and allowed for improved gun mounting and visibility. 

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152 Ibid, 103-104.
of the fuselage and allowed for better placement of armaments and afforded higher visibility to the pilot while performing the pylon turn.\textsuperscript{154}

Personnel at Wright Field began modifying the C-130 in the spring of 1967. In addition to carrying four 7.62 miniguns similar to the armament of the AC-47, the AC-130 carried four 20mm Vulcan cannons. Increased firepower was not the only aim of Project Gunship II; Wright Field personnel installed a variety of sensor equipment including a Night Optical Device (NOD), a successor to the “starlight scope” and a Forward-Looking Infrared system. These sensors fed into a Fire Control Computer System, which greatly enhanced firing accuracy. Beyond the improved weapons, sensors, and targeting system, the AC-130 prototype received advanced communications equipment, which allowed the aircrew to talk directly with ground forces, and a flare launcher and 20-kilowatt illuminator to provide battlefield illumination.\textsuperscript{155}

After extensive flight and equipment tests in the United States, the AC-130 arrived in Vietnam for combat tests on 21 September 1967. From the end of September to the beginning of December, the AC-130 received extensive evaluation through three test phases: close air support, armed reconnaissance, and interdiction. The U.S. Army participated in the evaluation process and gave the prototype high marks, asserting that the AC-130 performed significantly better than existing gunships. Furthermore, due to its performance, General Westmoreland hesitated to let the aircraft return to the U.S. for refurbishing after its initial evaluation phase. General William Momyer, Commander of the Seventh Air Force, ensured a quick turnaround of the prototype, which returned to

\textsuperscript{154} Ballard, Development and Employment of Fixed-Wing Gunships, 107.
\textsuperscript{155} Wolverton, The Genesis and Development of Gunship II, 5, 6.
Southeast Asia by February of 1968. In June 1968, the prototype moved from
interdiction missions over Laos to service in Vietnam. In South Vietnam, the gunships
were to support friendly forces in defense against a suspected offensive coming in the
wake of the surprise attack campaign launched by the People’s Liberated Armed Forces
and the People’s Army of Vietnam (PAVN) on 30 January 1968. After a second
offensive in May, PAVN launched a third on 17 August.\textsuperscript{156}

From February to November, the AC-130 continued to prove itself as a worthy
successor to the AC-47. Moreover, its effectiveness in nighttime interdiction missions
over the Ho Chi Minh Trail nearly outshined its performance in close air support.
Regardless of the mission, Air Force calculations based on the development cost,
ammunition and flare expenditures, and cost per hour for flying and maintenance
determined the AC-130 was one of the most cost effective close air support and
interdiction systems available.\textsuperscript{157} Although the AC-130 seemed the obvious choice to
replace the aging AC-47, the Air Force could not relinquish enough of the aircraft to
augment the Southeast Asia gunship force without affecting the airlift mission. In its
place, the Air Force selected the C-119 for gunship modification.\textsuperscript{158}

Selection of the C-119G constituted a compromise. The planned replacement for
the AC-47 possessed more cargo space and more horsepower, as well as the high-wing
configuration considered most favorable for the follow-on gunship force. Upgrades in

\textsuperscript{156} Ballard, \textit{The United States Air Force in Southeast Asia Development and Employment of Fixed Wing}
\textsuperscript{157} Ibid, 117.
\textsuperscript{158} Lt. Colonel Till, Major Thomas, \textit{Pave Aegis Weapon System (AC-130E Gunship)}, (San Francisco: HQ
payload and power allowed for the installment of improved navigation and sensor equipment, flare launcher and illuminator, and a computerized firing system along with the addition of a fourth 7.62 minigun and more ammunition.\textsuperscript{159} The upgrades were notable and allowed the AC-119G to supplant the AC-47 in its most effective roles such as close air support, armed reconnaissance and base defense. Nevertheless, the AC-119G lacked the speed and payload capacity of the C-130, and as another aging cargo aircraft, lacked the growth potential to assume new roles.

Another version of the AC-119, the AC-119K, remedied some of the AC-119G’s deficiencies. The addition of two auxiliary J-85 jet engines to the two radial propeller engines increased the aircraft’s operational takeoff weight by more than 10,000 pounds. The increased power allowed the AC-119K to carry more advanced equipment as well as two 20mm Vulcan guns. The added power also allowed the AC-119K to operate in the more challenging terrain of Laos and complement the small force of AC-130s in armed reconnaissance and interdiction.\textsuperscript{160} The AC-119K assisted in narrowing the gap between the shortcomings of the AC-119G and the potential of the AC-130. By the end of 1969, 7 AC-130s, 18 AC-119Gs, and 18 AC-119Ks comprised the gunship force in Southeast Asia. Budgetary concerns and the availability of aircraft created an amalgam to replace the AC-47 instead of a homogenous fleet of the preferred AC-130. The mixed force performed well, but losses to enemy air defenses along the Ho Chi Minh Trail raised more concerns about the vulnerability of the gunship.

\textsuperscript{159} Ibid, 3.
\textsuperscript{160} Captain James L. Cole Jr., \textit{Fixed Wing Gunships in SEA (July 69 - July 71)}, (San Francisco: HQ PACAF, Directorate of Operations Analysis, CHECO/CORONA Harvest Division, 1971), 29-30.
Antiaircraft artillery (AAA) along the Ho Chi Minh trail grew at an exponential rate. Midway through 1968, the prototype AC-130A had received enemy fire fifty-six out of fifty-seven sorties.\(^1\) In order for gunship operations to continue over Laos, new tactics, equipment, and coordination with other Air Force tactical aircraft were necessary. To evade AA fire the most effective technique required the illuminator operator to hang out over the rear cargo ramp secured by cables and scan the ground for incoming fire. When the operator spotted fire, he would direct the pilot to “break” or “hard break,” prompting the pilot to perform a 60 or 90 degree banking turn respectively. The evasion technique proved effective for incoming surface-to-air missiles (SAMs) as well. Due to the great threat SAMs represented, gunships did not operate in known SAM environments. Nevertheless, AC-130 crews encountered five SAM launches. If the crew spotted a SAM launch, they would inform the pilot and then the illuminator operator would request the pilot to dive when missile impact was imminent.\(^2\) Undoubtedly, the technique gave the illuminator operator considerable stress, but likely prevented disaster.

Evasion tactics alone could not protect gunships in Laos, the proliferation of AAA sites demanded further evaluation of interdiction missions. In July 1969, a group formed to study the issue. The group included Major James Wolverton from the AC-130 project and Major Ronald Terry from the AC-130 and AC-47 projects, as well as other officers and civilians who participated in the development of the prototype AC-130. The group suggested a variety of improvements to enhance the AC-130’s survivability and mission


\(^{2}\) Cole, *Fixed Wing Gunships in SEA (July 69- July 71)*, 44, 45.
performance. The suggestions included the addition of new night attack sensors, improved navigation and targeting equipment, larger caliber guns, and a new digital fire control system computer. The suggestions culminated in a proposal known as Surprise Package. The overarching objective of Surprise Package was to increase the attack altitudes of the gunship thereby lengthening the standoff range from 37mm and 57mm AAA and providing more time to react to incoming fire. Additionally, the improved night attack sensors enhanced the gunships ability to detect targets through jungle foliage, smoke, and adverse weather conditions.

Similar to previous gunship program developments Surprise Package utilized improvisation and repurposing equipment to satisfy requirements. Time did not permit the Air Force to develop and test a higher caliber weapon suitable for the gunship, so Air Force Systems Command acquired World War II era Bofors 40mm AAA guns from the U.S. Navy. The Surprise Package AC-130 carried two M-61 20mm guns and two Bofors 40mm guns. The 40mm guns represented the single most important modification of Surprise Package, although several other important innovations were included. One such innovation was the Black Crow magnetic anomaly detector. The Black Crow detected electromagnetic disturbances caused by enemy trucks’ ignition systems and then fed location information to the fire control computer. Another important innovation was the installation of two Low Light Level Televisions (LLLTV). The LLLTV

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164 Cole, *Fixed Wing Gunships in SEA (July 69-July 71)*, 63, 64.
complemented the other nighttime detection devices like the Night Observation
Device.\textsuperscript{166}

Combat evaluations of the Surprise Package AC-130 ran from 12 December 1969
to 30 April 1970 and just like its predecessors, it exhibited notable improvements from
existing systems. Quantitatively it is difficult to measure improvements to survivability
compared to the standard AC-130As due to the disproportionate amount of sorties flown.
One impressive statistic, however, is the average number of trucks damaged or destroyed
per sortie over its predecessor. Surprise Package destroyed or damaged 7.34 trucks per
sortie compared to 4.34 trucks by the standard AC-130. Verification of truck kills,
though, produced some controversy. Analysts determined that reported truck kills were
exceeding the known truck inventory. The issue stemmed from determining what
constituted a destroyed or damaged truck. Often, gunship attacks caused little damage to
trucks or crews quickly repaired them and returned the vehicles to service, the issue of
reporting truck kills was never resolved during the war. Despite the controversy, the AC-
130 stood as the most efficient truck killer in Seventh Air Force’s inventory.\textsuperscript{167}

Standoff range and evasion tactics alone could not guarantee survival for the
gunships, destroying AAA also became necessary. During the combat evaluation of the
first AC-130, the gunship occasionally called for flak suppression from fighter-bomber
aircraft. The AC-130 crew would direct aircraft like the F-4 to AAA sites and the jets
would deliver various types of bombs to silence the location. A study by the Seventh Air
Force Directorate of Tactical Analysis advised that F-4s and AC-130s could produce

\textsuperscript{166} Cole, \textit{Fixed Wing Gunships in SEA (July 69- July 71)}, 70, 71.
\textsuperscript{167} Cole, \textit{Fixed Wing Gunships in SEA (July 69- July 71)}, 75.; Mrozek, \textit{Air Power and the Ground War in
better results if the aircrafts coordinated their efforts instead of working independently.

The study led to the development of an armed escort and flak suppression mission for the AC-130 by the Eighth Tactical Fighter Wing’s 497th Tactical Fighter Squadron. By the end of December 1968, the 497th Squadron, began their gunship escort operations and over the next four months, compiled impressive statistics. Working cooperatively the truck-killer/gun-killer combination destroyed sixty-three 37mm AA guns and twenty-six trucks between January and April of 1969.\(^ \text{168} \) Additionally, the AC-119K experienced similar difficulties with AAA and adopted comparable operations with the 366th Tactical Fighter Wing.\(^ \text{169} \)

The cooperation between the special operations wings of the gunships and the tactical fighter wings of the F-4s led to further experimentation with innovative weaponry. Vietnam served as a test bed for advanced weapons. From the M16 rifle to heat-seeking air-to-air missiles, all of the service branches evaluated state-of-the-art weaponry in the crucible of Vietnam. Laser guided bombs, like the Pave Way, represented one successful implementation of new weaponry that benefitted gunship operations. Pave was an acronym for Precision Avionics Vectoring Equipment and indicated the Aeronautical Systems Division was responsible for the program. The Pave Way system entailed mounting a laser guidance system and control surfaces to existing general purpose, “dumb” bombs. The project known as PAVE SWORD required two aircraft to deliver and guide the bomb. A designator inside one aircraft, in this case the gunship, would illuminate the target with a laser. Sensors aboard the escorting F-4s and

\(^ {168} \) Ibid, 155-158.  
\(^ {169} \) Ibid, 291.
mounted to the bomb would track the reflected energy of the laser and guide the pilot on his attack run. Once the pilot released the bomb the mounted receiver continued to track the illuminated target and the control surfaces would course correct when necessary.  

Although PAVE SWORD produced promising results, it did not become available to the gunship interdiction missions until February 1971, relatively late into U.S. involvement in the Vietnam War.

Before the end of U.S. combat operations in Vietnam in early 1973, the USAF instituted several programs after Surprise Package to enhance the SEA gunship fleet. The Pave Pronto program converted the operational AC-130As and those that had not completed construction to match the enhancements of Surprise Package. Twelve converted AC-130As were operating in the panhandle region of Laos by the spring of 1971. As the Pave Pronto program completed upgrades, two additional programs started in parallel, Pave Spectre and Pave Aegis. The USAF initiated the Pave Spectre program to acquire C-130Es, a more modern version of the C-130, for conversion to gunships. The new AC-130E possessed a maximum gross takeoff weight more than 30,000 pounds over the AC-130A. The enhanced takeoff weight was due largely to updated versions of the T-56 turboprop engines, the increased horsepower allowed for more armor plating, more ammunition, and expanded fuel capacity. Eleven AC-130Es reached Vietnam at the beginning of 1972. The success of the Surprise Package and Pave Pronto programs sparked interest in expanding gunship armaments. Headquarters USAF approved the

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171 Ballard, 224.
172 Nalty, The War Against Trucks, 61-65.
Pave Aegis program to assess the AC-130’s capability of carrying and firing a large
caliber weapon, after some debate, the Air Force selected the 105mm Howitzer for
testing, replacing one of the 40mm Bofors guns. One of the AC-130Es from the Pave
Spectre program was reserved for the Pave Aegis program due in part to its greater gross
weight capability and better fire control system. Some reluctance developed within
Seventh Air Force over the program concerning the evaluation of an unproven weapon
system in an indispensable aircraft during the dry season and peak of interdiction
operations. Nevertheless, Seventh Air Force finally agreed with the provision that the
AC-130E could be converted back to the Pave Spectre configuration in-theater if the
weapon system failed to perform.173

The Seventh Air Force’s concerns dissipated when the Pave Aegis prototype
began its combat evaluation and demonstrated the capability of an airborne 105mm
cannon. By the end of March 1972, one Pave Aegis aircraft had flown thirty-two sorties
and had destroyed or damaged 218 trucks, with the 105mm Howitzer receiving credit for
76% of the kills. The system had impressed the Seventh Air Force enough to request the
modification of a second C-130E to Pave Aegis; however, AAA downed the original
Pave Aegis aircraft on the night of 30 March. The reaction to the loss of this aircraft
indicated the impression it had made, as the Seventh Air Force expedited modifications
of the second C-130E to minimize the number of interdiction missions without its most
potent weapon.174

173 Till, Pave Aegis Weapon System (AC-130E Gunship), 8, 10.
In a period of less than nine years, the fixed-wing gunship concept transformed from an untested theory to a valued asset in the Air Force’s tactical inventory. The continuous evolution resulted in a system nearly unrecognizable from the FC-47 that arrived in Southeast Asia at the end of 1964. The development, testing, and employment of the fixed-wing gunships reveal several positive traits of the Air Force during the Vietnam War as well as exposing several weaknesses.

One of the Air Force’s weaknesses entering the Vietnam War was its failure to develop doctrine and systems that addressed a wide enough spectrum of warfare to include the use of airpower for counterinsurgency. Although some planners within the military had given thought to the potential of a limited war below the scale of a nuclear exchange during Eisenhower’s administration, a significant change to the policy of Massive Retaliation did not arrive until John F. Kennedy became president. The adoption of the Flexible Response policy envisioned a wider spectrum of conflict and the use of proportional force. Nevertheless, Flexible Response was too shortsighted to envision the needs of a counterinsurgency operation in a challenging physical environment. Moreover, the Air Force still maintained its position that strategic airpower would serve as the most important instrument in warfare. Not until combat operations became eminent in Southeast Asia did the Air Force realize the problems of delivering accurate firepower against an insurgent force.

The fixed-wing gunship programs exemplified the Air Force’s improvisation ability. By repurposing existing aircraft and merging them with off-the-shelf technology,

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175 Clodfelter *The Limits of Air Power*, 28-29.
the Air Force filled a void in tactical airpower. In less than two years, the first gunships went from a concept to operational status, less than a quarter of the time it took to develop an original, new system. The gunship evolved through a variety of programs and the introduction of new aircraft, which enhanced and expanded its role. These innovations, however, did not occur without creative thinkers. Mid-career officers and professionals like Major Ronald Terry, Captain John Simons, and Ralph Flexman possessed a wealth of skills and experience to advance their ideas and the drive to follow through. Moreover, development of the gunship possessed a notable bottom-up approach that bypassed the politics and bureaucracy that often hindered progress at the upper levels of command.

Although the gunship program displayed the Air Force’s ability to correct an observed deficiency in a relatively short period, the positive traits adapted for problem solving also produced problems. Integrating the gunship and clarifying its role met with complications and exposed other issues within the Air Force. Once the AC-47 demonstrated its ability as a close air support system, the Air Force attempted to adapt it to other roles, particularly interdiction and armed reconnaissance, missions that TAC preferred and deemed more valuable. Nevertheless, the presence of AAA in Laos proved too dangerous to operate the AC-47, but it took the loss of four aircraft before the Air Force would realize the current gunship’s limitations. Flexibility, innovation, and improvisation are attractive qualities, yet the Air Force occasionally took too many risks by forcing new roles onto aircraft. Later gunship models proved more successful in the interdiction role. Nevertheless, the aircraft still required a permissive environment, void
of SAMs, and the coordination of other Air Force assets to operate safely in the skies over Laos.

Improvisation encountered further challenges when plans to replace the AC-47 began to form. No one in the Air Force would argue that the C-130 represented the optimal replacement for the AC-47. Nevertheless, modernizing the gunship force ran into problems due to the lack of availability of the C-130 airframe. The aircrafts’ need in its intended role for airlift prevented a complete modernization of the gunship force and resulted in a mixed inventory that included the AC-119G/K. The success of improvisation rested on the availability of aircraft, resources, and materials, when the Air Force could not acquire the optimal components compromises were necessary and often resulted in delays.

Despite the problems associated with improvising, the fixed-wing gunship developed a reputation in Southeast Asia as a formidable weapon. The most telling indicator of the success of the gunship is the long-term adoption of the AC-130 by the USAF. The close air support, interdiction, and armed reconnaissance system that sprung from the urgency to fill a need in a particular environment went on to serve in operations from Grenada in 1983 to the most recent wars in Iraq and Afghanistan. The gunships’ continued service both reflects the Air Force’s need for a variety of aircraft and weapon systems to operate across a wide spectrum of conflict and the course correction that stemmed from the lessons learned during the Vietnam War.

CONCLUSION

One can easily see the influence the growing bipolarity of global politics, the character of national defense policy, and the dominance of the strategic mission had on Tactical Air Command’s progression and the development of tactical air power from the end of World War II into the Vietnam War. American leaders shaped a worldview that prioritized deterring Communist aggression and placed emphasis on strategic air power until President Kennedy re-emphasized conventional capabilities. In the early years of the Cold War, TAC’s relationship with Strategic Air Command represented a paradox. SAC stood as the greatest threat to TAC’s continued growth and development, but the two commands maintained a partnership to thwart the influence of the Army and the Navy. Nuances within the intraservice relationship, dogmatic adherence to principles of air power, and the allure of technological solutions add to the other factors to form a more complete picture in the development of tactical air power.

The Korean War proved conventional capabilities were still necessary and saved TAC from extinction. The lessons derived from the conflict by the Air Force, however, pressed TAC to view future war through the same lens as SAC. Instead of applying lessons to become more flexible and expand capabilities to meet a broader spectrum of warfare, TAC took on the same rigid posture as SAC. TAC leadership’s interpretation of the indivisibility of air power fostered the Composite Air Strike Force, which had all of the qualities of SAC in miniature. Employment of the CASF left units vulnerable to attack and lacked a true capability to support surface forces with conventional weapons; however, to TAC leaders, it appeared as the most effective use of the available weapons
and aircraft. Moreover, it was a means to sustain the command. The adherence to the rule of the indivisibility of air power produced a force of tactical aircraft in the 1950s that lacked broad applications and revealed the Air Force’s attempt to bend the war to the weapon. Of all the services, the Air Force remained the most technologically advanced, but incorporating technology presented obstacles.

Without closer examination, the Air Force’s technological advances seemed to come in leaps and bounds. In a decade, fighters evolved from prop-driven aircraft with reciprocating engines to swept-wing jet fighters, some of them capable of twice the speed of sound, but Air Force thinking in regards to technology created another paradox. While incessantly looking for technological solutions to fight the next war, the Air Force had to address ways to incorporate existing systems designed seven to ten years in the past. This paradox created a fourteen to twenty year gap between what the Air Force envisioned as its solutions and the reality of its capabilities, further complicated by TAC’s identity crisis and global political situations that could change overnight. The Vietnam War is one of the best contemporary examples of this issue. The Air Force realized deficiencies in tactical air power too late to develop and construct a ground-up system that was ready to deploy by the start of combat operations. Case in point is the development of the A-10 Thunderbolt II. In December of 1966, Headquarters USAF issued a Requirements Action Directive (RAD) for a specialized close air support aircraft to satisfy long-term needs, stemming from the lessons already coming from Vietnam. Typical to the process for acquiring new aircraft, a series of studies and concept formulations took place before the Air Force released a request for proposals in May of
1970; Fairchild Republic delivered the first production A-10 in October of 1975, completing a nine-year process.\footnote{177} Unable to count on the delivery of new systems the Air Force had to rely on improvisation to fill needs, a trait they exploited with proficiency.

Repurposing aircraft to meet needs was a theme of air power in the Vietnam War that went beyond development of the fixed-wing gunship. The Air Force converted its flagship strategic bomber, the B-52, to drop iron bombs to participate in the strategic campaign in Southeast Asia. Likewise, the F-105 flew more sorties in Operation Rolling Thunder than any other aircraft to deliver conventional weapons.\footnote{178} Nevertheless, improvisation and repurposing aircraft had limits and revealed the extent of Air Force rigidity in regards to doctrine and political situations. The constant enhancement to the fixed-wing gunships weapons served as another example of the Air Force’s reliance on firepower. The emphasis TAC placed on interdiction campaigns transformed the fixed-wing gunship from a precision close air support weapon to a high-powered system for truck killing and placed it at risk in skies with heavy AAA fire. The repurposing of the F-105 and the B-52 had similar issues, as these aircraft were vulnerable to surface to air missiles and enemy interceptor aircraft. Moreover, the Vietnam War demonstrated that overwhelming firepower does not secure victory. Mark Clodfelter notes in *The Limits of Air Power* that “air power’s ability to achieve results through other than nuclear devastation remains uncertain.” Clodfelter goes on to state that technological

\footnote{178} Clodfelter, *The Limits of Air Power*, 118-119, 133.
advancement has not guaranteed military success, but “to create a modern vision of air
power that focuses on the lethality of its weaponry rather than on that weaponry’s
effectiveness as a political instrument.”

Reliance on technological solutions and strict adherence to long held views on air
power remains an issue with the Air Force today. The rhetoric surrounding the recent
announcement of the retirement of the A-10 Thunderbolt II echoes the same arguments
from commanders more than sixty years ago. Secretary of Defense Chuck Hagel
announced plans to retire the close support and anti-armor aircraft citing budgetary
limitations. Hagel called the aircraft “a 40-year old single-purpose airplane originally
designed to kill enemy tanks on a Cold War battlefield. It cannot survive or operate
effectively where there are more advanced aircraft or air defenses.” The Department of
Defense states that cutting the A-10 will save $3.7 billion over five years, money that will
help support the controversial and delayed F-35 program. Commander of Air Combat
Command General Michael Hostage agrees with the decision and believes that the multi-
purpose design of the F-35 will fill the void left by the aging A-10. Hostage cites the A-
10’s contributions to counterinsurgency operations in the wars in Afghanistan and Iraq
and believes the aircraft still has value, but defense planning is turning towards
America’s “near-peer competitors,” likely China and Russia. The thinking of Hagel
and Hostage are identical to the views of General Cannon in the 1950s as well as long-
term planning by the Truman and Eisenhower administrations. James Forrestal’s

179 Ibid, 203.
180 Dan Sagalyn, “Airmen at Odds with Air Force Brass Over Future of Beloved A-10 Plane,” PBS
Newshour, http://www.pbs.org/newshour/updates/air-force-brass-vetoes-lower-ranks-retiring-workhorse-
10-plane/#the-rundown, accessed April 8, 2014.
observation concerning the form and character of a future war without knowing the actions of the enemy applies to the military in 2014 the same as it did in 1948. Strategic and force planning was an intellectual exercise throughout the Cold War and remains so today, one where the variable representing the unknown actions of the enemy is replaced by the basic thinking and the culture of the services.

Nevertheless, if the thinking and culture of the Air Force has remained the same then its ranks includes dissenters and innovators who will voice their concerns over their services decisions. The airmen and surface forces who work the closest with the A-10 have already spoken out about the aircraft’s retirement. The protests and warnings from commanders like Quesada and Weyland prevented their command and the Air Force from narrowing capabilities to the point it could not fight a limited war, however degraded the ability had become. Likewise, innovators like Flexman and Terry spotted deficient areas and applied improvised solutions in wartime that greatly reduced the time from design to operation and prompted long-term planning. The increasing reliance on technology and the need for more specialized personnel to operate and maintain them, however, has limited the ability to provide ad hoc solutions. Additionally, the connection between the indivisibility of air power and the traditional reliance on firepower will prove as ineffective in bringing victory to America in the future as it did in Vietnam.

\[181\] Ibid.
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