

Back to it's Roots

Army Aviation's Doctrinal and Organizational Homecoming

By MAJ John Q. Bolton

Air-ground teamwork in combat on the battlefields of [Europe] at last became a reality.

—LTC Kent Greenfield, Army Ground Forces and the Air-Battle Team

During the first decade of this century, Army Aviation transformed itself from a parochial, Army-centric force into a highly skilled joint and international partner. Attack aviation in particular migrated from a focus on independent “deep attacks” toward close integration with ground forces. The net sum of these changes would ironically return Army Aviation to doctrinal foundations developed in the 1940s and refined in Vietnam and, structurally, to organizations that resemble World War II (WW II) tactical air commands (TAC).

Entering Iraq and Afghanistan, Army Aviation doctrine barely mentioned close coordination with ground units whereas later manuals were dedicated to detailed integration and close combat. In fact, while 1997’s Field Manual (FM) 1-112, *Helicopter Operations* dedicates 76 pages to operations, there is nearly no mention of how Army helicopters should conduct close integration, let alone fire near friendly positions. This focus on unitary operations is ahistorical for several reasons. First, Army forces are predominately tactical, but “deep attacks” were focused on the operational level.¹ Second, the major growth in Army Aviation—its rebirth so to speak—in Vietnam was exclusively predicated

on close coordination between ground units and aviation.

The emergence of the helicopter in Vietnam challenged previous Army-Air Force agreements over who controlled military aviation. A fierce debate grew until the services compromised in 1966: “In return for the Army’s fixed-wing transports, the Air Force conceded [most rotary-wing operations], including direct fire support.”² The Army embraced the helicopter as a means to garner support rather than relying on the Air Force.

performing Army “direct aerial fire support.”³ The Army viewed “helicopter gunships merely as occupying one point in a spectrum of escalation from the infantry’s personal arms to Air Force tactical aircraft.”⁴

After Vietnam, the Army returned toward its focus on Eastern Europe. AirLand Battle doctrine envisioned attack helicopters interdicting Soviet formations in “deep areas” beyond the range of artillery.⁵ The epitome of this focus was FM 1-112, which focused on

Attack Helicopter Operations Field Manual Comparison		
	FM 1-112 (1997)	FM 3-04.126 (2007)
Regulation Name	Attack Helicopter Operations	Attack Reconnaissance Helicopter Operations
Battalion Type	Attack Helicopter Battalion	Attack Reconnaissance Battalion
Mission Priority	Attack, Recon, Security	Recon, Security, Movement to contact, Attack
Purpose	Complement other maneuver forces	Facilitate ground movement
Employment Level	Battalion	Teams, prepared to fight at company/battalion
Role	Aerial maneuver units characterized as highly mobile and lethal; capable of destroying armor, personnel, and material	Shaping Operations; maneuver units that dominate but do not occupy

Source: Darren Buss, MAJ ,USA, “Evolution of Army Attack Aviation: A Chaotic Coupled Pendulums Analogy” (monograph, School of Advanced Military Studies, 2013).

In fact, the Army had seen the proverbial light in the form of helicopters. In addition to aerial mobility (assault), supply, and reconnaissance, the helicopter gave the Army organic airborne fire support. By 1967, the first dedicated attack helicopter, the AH-1 Cobra, was operating in Vietnam,

battalion and company-level operations and engagement area development.

By 2007, however, deep operations had given way to team tactics directly in support of small units. The embodiment of this change was FM 3-04.126 *Attack*



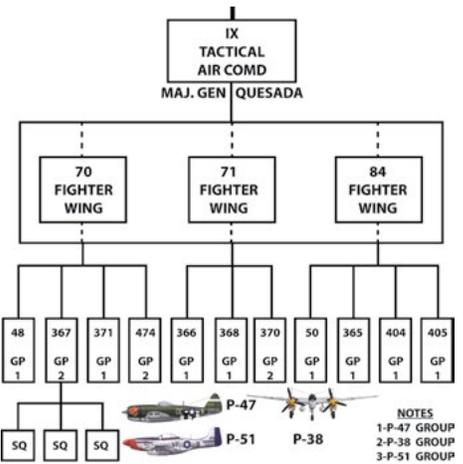
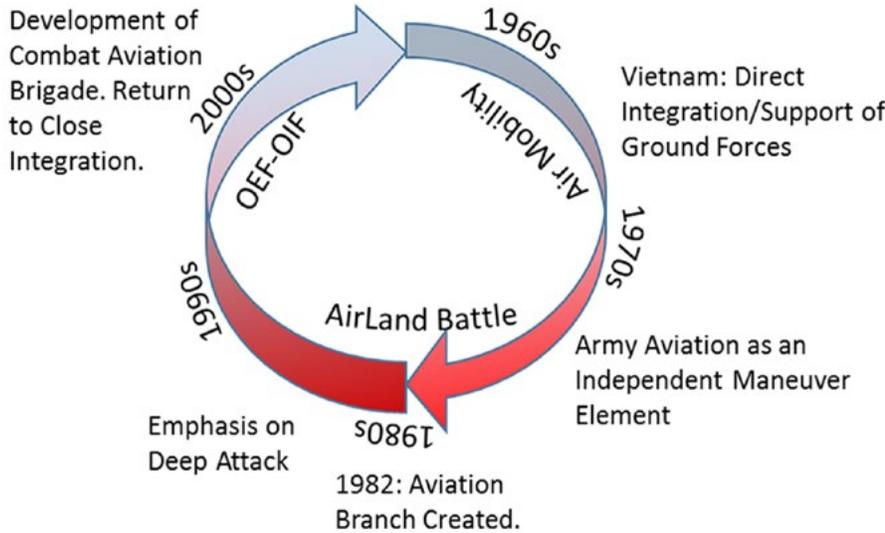
Reconnaissance Helicopter Operations. The new manual supplanted the “deep attack” paradigm with team tactics supporting urban operations, including close-combat attack.

Rather than “fly away from the Army,” as the Air Corps had, by 2006 Army Aviation was firmly committed to supporting the Soldier in the ground fight.⁸

air mobility units of Vietnam, their real historical legacy is the WWII TAC.

Example TAC Organizational Chart (NOV 1944)

THE EVOLUTION OF ARMY AVIATION DOCTRINE



Source: AAF. *Condensed Analysis of the Ninth Air Force in the European Theater of Operations* (1946); Author’s inclusion of aircraft graphics. Note: A squadron was roughly equivalent to a modern Army Aviation company.

The net sum of these changes was to complete a doctrinal circle from close operations in Vietnam to a focus on independent, “deep” operations followed by a return to team tactics and integration with ground units outlined in the 2007 manual. Modern doctrine acknowledges the flexibility of aviation: “Army Aviation conducts attacks at multiple echelons. These can range from elements as small as attack or scout weapons teams using manned-unmanned teaming or a single armed unmanned aircraft system, up to the battalion or squadron level.”⁶ Doctrine also recognizes the inherent advantages of integrating Army Aviation into the combined arms team:

“I beg of you, to know yourself and your weapons, and to be frank among yourselves and with the rest of the Army. The Army will believe what the Air Corps says it can do, and rely on it. If its prowess is exaggerated, through whatever cause, disillusionment surely will come with war.”

—LTG Lesley McNair, Address to Graduating Airmen, 1938

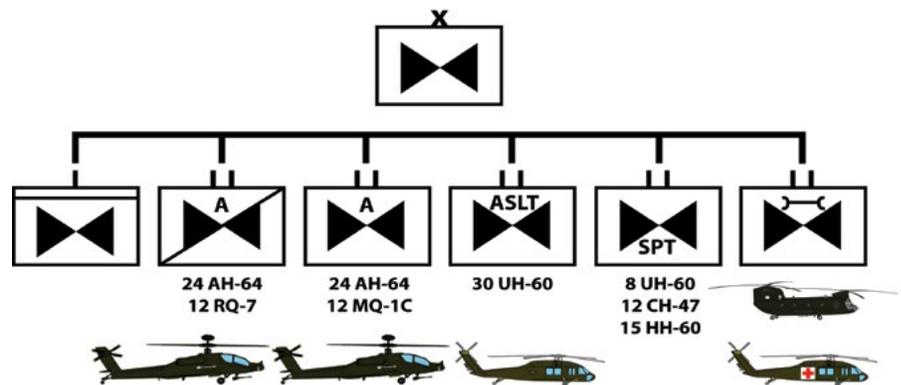
Army Aviation organization also changed, migrating from regiments controlled by Army corps designed for independent operations to the flexible combat aviation brigades (CAB), which combined each type of Army aircraft under a tactical headquarters. Though the CAB mimics the

During the Interwar Period, nascent American and British air services fought for independence. They largely embraced the theories of Italian Giulio Douhet, who predicted that air power would “crush the material ... resistance of the enemy.”⁹ He proposed an independent air force using fleets of bombers to destroy a nation’s heartland:

In terms of military results, it is much more important to destroy a railroad station, a bakery, a war plant, or to machine-gun a supply column, moving trains, or any other behind-the-lines objective, than to strafe or bomb a trench. The results are immeasurably greater in breaking morale ... in spreading terror and panic...¹⁰

“Army aviation units are organic, assigned, or attached to corps, divisions, and brigades and perform air-ground operations as part of a combined arms team. Army aviation assets, normally, receive mission-type orders and execute them as an integral unit or maneuver element. Special situations may arise where attack aviation assets are employed in smaller units.”⁷

Regardless of the size of the element however, Army Aviation remains committed to supporting the ground force.



Army Combat Aviation Brigade (2016)

Source: FM 3-04. *Army Aviation*, 2016, 2-2; Author’s inclusion of aircraft graphics.



Douhet implied the necessity of centralized control to mass the effects of air power, referring to ground support as “useless, superfluous and harmful.”¹¹ The necessity of independent air forces stressed by Douhet was a welcome relief to the Royal Air Force and Army Air Forces (AAF), who both desired service autonomy. This focus on strategic bombing—which supported service independence—meant the AAF never developed the organizational or communication systems necessary for effective air-ground operations.¹² In fact, the AAF latched onto unproven strategic bombing theories that relied on three unproved methods: selecting the right targets; penetrating enemy air defenses; and achieving bombing precision. This framework assumed that vital targets existed; but experience over Germany would prove otherwise.

The AAF furiously pursued strategic bombing to the near-abandonment of other concerns. Even AAF commander General Henry Arnold was frustrated at the AAF’s inability to support Army Ground Forces (AGF) exercises. During the 1942 corps-level maneuvers, the AAF provided less than 300 aircraft, many of which were obsolete, despite promising over 700.¹³ The lack of AAF participation “served to confirm to the AGF that the AAF was committed to its own mission and priorities, irrespective of the wants and needs of the ground forces.”¹⁴ As a result, America began the European War not only inexperienced, but with serious issues in air-ground cooperation and doctrine. Many United States Army officers believed that AAF lacked the will, the ability, and the means to conduct a sustained campaign employing aircraft in close support of land units.

Following significant issues in air-ground coordination in North Africa, air and ground components were at laager heads. In July 1943, the AAF without the consent of the AGF, published FM 100-20, *Command and Employment of Air Power*. Field Manual 100-20 clearly favored strategic bombing over tactical support. On the first page, the new manual declared air power’s independence in bold type:

DOCTRINE OF COMMAND AND EMPLOYMENT

1. RELATIONSHIP OF FORCES -- LAND POWER AND AIR POWER ARE CO-EQUAL AND INTERDEPENDENT FORCES; NEITHER IS AN AUXILIARY OF THE OTHER

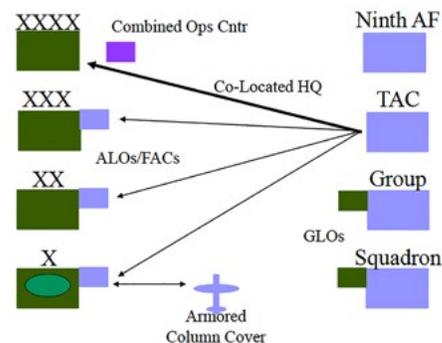
While most AGF officers recognized the need for air superiority, they were upset that FM 100-20 gave tactical air support low priority. Indeed, the new manual only mentioned liaison/ coordination between a tactical air force and theater command, whereas previous doctrine required coordination to the regimental level.¹⁵ The AGF commander, LTG McNair, viewed FM 100-20 as a testament to the “indifference of the Air Staff to cooperation of air with ground forces.”¹⁶

Practically however, the document’s main influence was a much needed clear delineation between tactical and strategic air forces. Though AAF resources still tilted toward the bombers, in an era of almost unlimited spending and cheaper aircraft, FM 100-20 allowed freedom for tactical air leaders.

In Northern Europe, the 9th Air Force filled the tactical role. Its commander, LTG Hoyt Vandenberg, aligned a TAC with each field army. The TAC commanded one to three fighter wings consisting of seven to twelve fighter-bomber groups (100 aircraft each) and a reconnaissance group.¹⁷ Vandenberg stressed the importance of air-ground cooperation through a formal program of exchange officers between air and ground units. In fact, Vandenberg’s initial chief of staff was an infantry officer.¹⁸ Though formally separate, Army and TAC commanders, having fought together since 1942, generally allowed battlefield realities and personal relationships to supercede doctrinal rigidities.¹⁹

Whereas the bombers operated with minimal coordination between ground forces, the TACs established coordination schemes recognizable to any contemporary Army aviator.

TAC Communications Schematic Fall 1944



Source: Dr. Christopher Gabel, (lecture, Army Command and General Staff College, February 2015).

The best air-ground team was 3rd Army and XIX TAC, led respectively by GEN George Patton and BG Otto Weyland. Army Air Force GEN Carl Spaatz described them as: “the greatest example of air-ground cooperation that has ever been or will ever be.”²⁰ Though some AAF officers used FM 100-20 to demand coequal status with ground forces, Weyland viewed it as merely a starting point for developing solutions which fit the situation at hand.²¹ To support Patton, “Weyland threw away the air power book, decentralizing operations, delegating command, dispersing assets as the situation dictated.”²² Field Manual 100-20 characterized tactical air power as the “most difficult to control, [the] most expensive, and, in general, [the] least effective [method],” but XIX TAC demonstrated effectiveness and a low loss rate.²³ Despite operating at low altitudes over German positions, which meant facing near-ubiquitous flak, XIX TAC loss rates were better than the bombers.²⁴ The lower loss rates of tactical aircraft were, in part, a result of the close cooperation enjoyed with the ground forces.

Because of the close cooperation between 3rd Army and XIX TAC, procedures for requesting and controlling air support were streamlined and integrated into operations.²⁵ This resulted, in part, from placing aviators as far forward as possible. Exceeding doctrine, Weyland attached a pilot to each 3rd Army battalion coordinate with four-ship fighter-bomber teams.

As 3rd Army advanced, Weyland moved his headquarters frequently. At one point in August 1944, XIX TAC had four separate

command and control elements spread across northern France, coordinating operations from 12 different airfields.²⁶ That month Weyland moved his headquarters seven times, displacing nearly 250 miles.²⁷ While adjacent headquarters created mutual understanding, 3rd Army-XIX TAC also planned jointly. Weyland attended Patton's operations meeting each morning and their staffs coordinated nightly.

The XIX TAC pilots would coordinate with 3rd Army artillery to "black out" German flak, rather than suffer through it like the heavy bombers.²⁸ American ground forces employed tactical air power as effectively as organic artillery; more effectively, perhaps, because the fighter-bombers could identify and destroy discreet targets, such as tanks, that artillery could only suppress.²⁹ A division commander remarked: "The best tank destroyer we have is a P-47."³⁰ Though employing aircraft against single targets violated tenets of FM 100-20, Weyland understood that time was a critical factor for Patton's columns.³¹ He explained: "Well, time was of the essence. . . they were moving, so by the time they'd stop a column and deploy their artillery, . . . it might take them an hour or two. I'd have fighter-bombers out in front and we'd try to take care of anything."³² Because of the relentless pursuit of the fighter-bombers, many Germans developed, "The German look," head turned skyward looking for the next fighter-bomber. When asked what could have "neutralized the Allied air forces," Generaloberst Heinz Guderian responded simply: "The creation of a better Luftwaffe."³³

Patton and Weyland provide the premier example of what an effective air-ground team can accomplish through mutual understanding, close cooperation and proximity, as well as a willingness to set aside doctrine and service parochialism. Though he was not Patton's subordinate, Weyland refused to "wave an AAF flag or FM 100-20" or explicitly follow AAF doctrine.³⁴ Patton reciprocated his trust, even recommending that Eisenhower make Weyland a corps commander.³⁵ In December 1944, Weyland summarized the teamwork:

The one I have particular in mind is the mutual respect and comradeship that has been built up between all elements of the XIX TAC and the 3rd Army. My boys like the way the 3rd Army fights. The 3rd Army goes ahead aggressively. My kids feel that this is their Army.... I think you can quote that our success is built greatly on mutual respect and comradeship between the air and ground.³⁶

Comparing the doctrinal missions and organization of the TACs and CABs illustrates the similarities. Though different in scale—XIX TAC averaged over 400 aircraft and 12,000 personnel—the same principles still apply.³⁹

One of the most important aspects of successful air-ground coordination is relationships between ground and air units, creating cooperation and common

Table 1. Similarities between TACs and CABs		
Organization	Tactical Air Commands	Combat Aviation Brigades
Missions	Close Air Support Interdiction Deep Interdiction Dive Bombing Counter-air Reconnaissance	Reconnaissance/Security Movement to Contact/Attack Air Assault/Air Movement Air movement Aerial Mission Command CASEVAC/Personnel Recovery MEDEVAC
Enabling Operations	Signal (Wire) Installation Air Traffic Services Leaflet dropping	Forward Arming- Refueling Downed Aircraft Recovery Air Traffic Services Unmanned Aircraft Systems
Subordinate Organizations	Fighter Groups Fighter-Bomber Groups Reconnaissance Group Night Fighter Groups	Attack-Reconnaissance Battalion(s) Assault Battalions General Support Battalion
Proximity to Ground Force	Close proximity or co-located. Moved with ground unit.	Co-located or close proximity. Can function as maneuver HQ.
Relationship to Ground Forces	Close Cooperation at the HQ level. Coordination with units.	General Support to Army Division/JTF with occasional direct support.
Higher HQ	Tactical Air Force	Division, Corps or JTF

Source: 9th Air Force Charts, Vandenberg Papers; AAF, *Condensed Analysis of the Ninth Air Force in the European Theater of Operations* (1946); FM 100-20 *Command and Employment of Air Power* (1943); FM 3-04 *Army Aviation* (2015).

CAB-TAC Similarities

The effectiveness demonstrated by Third Army and XIX TAC was the result of mutual understanding and close proximity. The CAB provides a similar level of support and integration to ground units. During operations, the close proximity of XIX TAC and 3rd Army headquarters allowed for bottom-up refinement of plans. Weyland enhanced this by devolving authority to his flight squadrons to enhance cooperation. Fighter-bomber groups developed habitual working relationships with divisions and regiments; for the first time, ground units could also reliably talk directly to aircraft overhead.³⁷ Moreover, Patton and Weyland encouraged lateral coordination, rather than smothering it. Furthermore, like the current modern CAB—and unlike modern U.S. Air Force (USAF) doctrine— XIX TAC and 3rd Army operations, down to the regimental level, were "planned, discussed, and arranged together. . . allowing for absolute homogeneity between air and ground."³⁸

understanding between echelons. It is less about the "box," meaning the aircraft and its technology, than it is about the "man in the box."⁴⁰ Due to their close proximity and regular working relationship, 3rd Army corps and division headquarters laterally coordinated with XIX TAC fighter-bomber groups. Likewise, the CAB is closely aligned with a single division allowing for long-term working relationships.

This creates not only unity of command, but also common understanding, as the CAB is close - special, temporally, and doctrinally - to supported units. Since Army helicopters do not require improved sites or long runways, they can co-locate forward with ground units. Conversely, with few exceptions, the USAF has not placed aircraft forward at austere sites since Korea.

The contemporary division-CAB relationship mirrors the WW II Army-TACs Army structure, making CABs the historical



descendant of the TAC and the concept of tactical air power as a whole. Because of the organic chain of command, close proximity, and mutual understanding created by the Army's division-CAB task organization, Army aviators are able to tailor and employ air power to best suit the Army's needs.

The Past as the Future

What does Army Aviation's transformation

from an independent force to one closely tied to ground forces tell us? First, close air-ground cooperation is critical to the success of the overall effort. Unitary air power has the same limitations as a tank regiment without reconnaissance or infantry. Air and ground partners enhance the other's strengths and mitigate their respective weaknesses; doctrine should reflect this. Second, cooperation creates

effectiveness, meaning the structure of organization's matter. Good structures ease communication and proximity, leading to good cooperation and mutual understanding. Effective cooperation also requires leadership to instill disciplined focus on the overall mission, and discipline between partners. Modern doctrine calls this Mission Command.



- ¹ Crosbie E. Saint, LTG (USA) and Walter H. Yates Jr., COL (USA), "Attack Helicopter Operations in the AirLand Battle: Deep Operations," *Military Review* 68 no. 7, July 1988:2-9.
- ² Richard G. Davis, *The 31 Initiatives: A Study in Air Force-Army Cooperation* (Washington, DC: Office of Air Force History, 1987), 20.
- ³ Alfred Goldberg and LTC Donald Smith, USAF, *Army-Air Force Relations: The Close Air Support Issue* (Santa Monica, CA: RAND, October 1971), 32.
- ⁴ Ian Horwood, *Interservice Rivalry and Airpower in the Vietnam War* (Ft. Leavenworth, KS: Combat Studies Institute Press, 2006), 129.
- ⁵ FM 100-5 Operations, 1982, 1-1.
- ⁶ FM 3-04 Army Aviation, 2007, 3-3.
- ⁷ ATP 3-09.32 JFIRE, January 2016, 62.
- ⁸ James Williams, *A History of Army Aviation-From Its Beginnings to the War on Terror* (Lincoln, NE: iUniverse, 2005), 380.
- ⁹ Giulio Douhet, *The Command of the Air*, USAF Warrior Studies (Washington, DC: Office of Air Force History, 1983), 49,103.
- ¹⁰ *Ibid.*, 126.
- ¹¹ *Ibid.*, 100.
- ¹² Jonathan M. House, *Toward Combined Arms Warfare : A Survey of 20th-Century Tactics, Doctrine, and Organization*, Research Survey (Fort Leavenworth, KS: Combat Studies Institute, 1985), 77.
- ¹³ Kent R. Greenfield, COL, (USA), *Army Ground Forces and the Air-Battle Team* (Ft. Monroe, VA: Army Ground Forces, 1948), 13-17, 20.
- ¹⁴ B. Michael Bechthold, "A Question of Success: Tactical Air Doctrine and Practice in North Africa, 1942-43," *The Journal of Military History* 68, no. 3 (2004): 826.
- ¹⁵ FM 100-20 Command and Employment of Air Power 1943, 10; FM 31-35 (1942) Aviation in Support of Ground Forces, 5.
- ¹⁶ Greenfield, 49.
- ¹⁷ Headquarters, 9th Air Force, "Ninth Air Force Organizational Chart," June 6th, 1944, Box 53: Ninth Air Force, Hoyt Vandenberg Papers, Manuscript Division, Library of Congress, Washington, DC.
- ¹⁸ Phillip S. Meilinger, Hoyt S. Vandenberg, *the Life of a General* (Bloomington, IN: Indiana University Press, 1989), 51.
- ¹⁹ David N. Spisres, *Air Power for Patton's Army: XIX Tactical Air Command in the Second World War* (Washington, DC: Air Force History and Museums Program, 2002), 147-49.
- ²⁰ Bradford Shwedo, *XIX Tactical Air Command and Ultra* (Maxwell AFB, AL: Air University Press, 2001), 4.
- ²¹ *Ibid.*, 8.
- ²² Dennis E. Showalter, *Patton and Rommel : Men of War in the Twentieth Century*, 1st ed. (New York: Berkley Caliber, 2005), 371.
- ²³ FM 100-20, 12
- ²⁴ W. A. Jacobs, "The Battle for France, 1944," in *Case Studies in the Development of Close Air Support*, ed. Benjamin Frankling Cooling (Washington, DC: Office of Air Force History, 1990), 279-280.
- ²⁵ Jacobs, 260.
- ²⁶ Spires, 152.
- ²⁷ XIX TAC, "Twelve Thousand Fighter-Bomber Sorties: XIX Tactical Air Command's First Month Operations in Support of Third Us Army in France," *France*, September, 1944, 59, accessed March 1, 2015, <http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll8/id/356>.
- ²⁸ Greenfield, 90; Meilinger, 51-52.
- ²⁹ Peter R. Mansoor, *The GI Offensive in Europe: The Triumph of American Infantry Divisions, 1941-1945* (Lawrence, KS: University Press of Kansas, 1999), 165.
- ³⁰ Greenfield, 90.
- ³¹ FM 100-20, 12.
- ³² Shwedo, 10.
- ³³ Heinz Günther Guderian and Fritz Kramer, *Fighting in Normandy: The German Army from D-Day to Villers-Bocage* (Mechanicsburg, PA: Greenhill Books, 2001), 205.
- ³⁴ Spires, 298.
- ³⁵ *Ibid.*, 160.
- ³⁶ Patton, Weyland, and SHAEF correspondents, December 9, 1944, 5.
- ³⁷ Kenn Rust, *The 9th Air Force in World War II* (Fallbrook, CA: Aero Publishers, 1967), 67-69.
- ³⁸ Patton, Weyland, and SHAEF correspondents, December 16, 1944, 6.
- ³⁹ XIX Tactical Air Command, *XIX TAC Statistical Summary*, 24.
- ⁴⁰ Steve Brown, *Army Command and General Staff College*, conversation with the author, April 20, 2015.

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Acronym Reference

AAF - Army Air Force	TAC - tactical air commands
AGF - Army Ground Force	WW II - World War II
CAB - combat aviation brigade	USAF - United States Air Force
FM - field manual	

