



The Better Blitzkrieg

A Comparison of
Tactical Airpower Use
by Guderian and Patton

Ainsworth M. O'Reilly

Major, USAF

Air Command and Staff College

Wright Flyer Paper No. 43



Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE APR 2010	2. REPORT TYPE	3. DATES COVERED 00-00-2010 to 00-00-2010			
4. TITLE AND SUBTITLE The Better Blitzkrieg: A Comparison of Tactical Airpower Use by Guderian and Patton		5a. CONTRACT NUMBER			
		5b. GRANT NUMBER			
		5c. PROGRAM ELEMENT NUMBER			
6. AUTHOR(S)		5d. PROJECT NUMBER			
		5e. TASK NUMBER			
		5f. WORK UNIT NUMBER			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Air University, Air Command and Staff College, Maxwell AFB, AL, 36112		8. PERFORMING ORGANIZATION REPORT NUMBER			
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSOR/MONITOR'S ACRONYM(S)			
		11. SPONSOR/MONITOR'S REPORT NUMBER(S)			
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT Historians have debated for decades the reasons for the spectacular failure of the Luftwaffe during the last three years of World War II. As the Luftwaffe went down in flames, the United States Army Air Forces arose to conquer the airspace on the Western Front of Europe. Before its downfall, Luftwaffe tactical airpower was key to Gen Heinz Guderian's surprise attack through the Ardennes to the English Channel in 1940. Similarly, in 1944, as Gen George S. Patton broke out of the Normandy beachhead by unleashing Operation Cobra, tactical airpower proved vital to his ability to march to the German border in only six weeks. This paper analyzes a host of primary sources authored by the main players in those campaigns (Guderian, Patton, and Weyland) and focuses on the key differences between the Luftwaffe support to Guderian and XIX Tactical Air Command support to Patton during their historic campaigns on the Western Front of Europe in World War II.					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified	Same as Report (SAR)	34	

Air University

Allen G. Peck, Lt Gen, Commander

Air Command and Staff College

Anthony J. Rock, Brig Gen, Commandant

Zoë M. Hale, Col, PhD, Dean

Brett E. Morris, Col, PhD, Director of Research

Brett E. Morris, Col, PhD, and John L. Mansuy, Maj, Series Editors

Brian W. Landry, Lt Col, PhD, Essay Advisor

Air University Press

John A. Shaud, General, USAF, Retired, PhD

Director, Air Force Research Institute

Richard Bailey, PhD, Content Editor

Tammi K. Long, Copy Editor

Nedra O. Looney, Prepress Production

Daniel Armstrong, Cover Design

Please send inquiries or comments to
Editor

The Wright Flyer Papers

Air Command and Staff College (ACSC/DEI)

225 Chennault Circle, Bldg. 1402

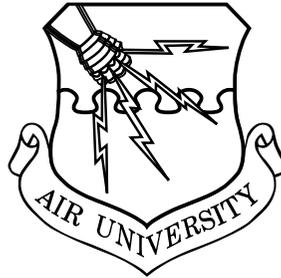
Maxwell AFB AL 36112-6426

Tel: (334) 953-6810

Fax: (334) 953-2269

E-mail: ACSC@maxwell.af.mil

AIR UNIVERSITY
AIR COMMAND AND STAFF COLLEGE



The Better Blitzkrieg
A Comparison of Tactical Airpower
Use by Guderian and Patton

AINSWORTH M. O'REILLY
Major, USAF

Air Command and Staff College
Air Force Research Institute
Wright Flyer Paper No. 43

Air University Press
Air Force Research Institute
Maxwell Air Force Base, Alabama

April 2010

This Wright Flyer Paper and others in the series are available electronically at the Air University Research Web site <http://research.maxwell.af.mil> and the AU Press Web site <http://aupress.au.af.mil>.

Disclaimer

Opinions, conclusions, and recommendations expressed or implied within are solely those of the author and do not necessarily represent the views of the Air University, the United States Air Force, the Department of Defense, or any other US government agency. Cleared for public release: distribution unlimited.

Foreword

It is with great pride that Air Command and Staff College presents another in a series of award-winning student research projects from our academic programs that reach nearly 11,000 students each year. As our series title indicates, we seek to promote the sort of imaginative, forward-looking thinking that inspired the earliest aviation pioneers, and we aim for publication projects that combine these characteristics with the sort of clear presentation that permits even the most technical topics to be readily understood. We sincerely hope what follows will stimulate thinking, invite debate, and further encourage today's air war fighters in their continuing search for new and better ways to perform their missions—now and in the future.

A handwritten signature in black ink, appearing to read 'Anthony J. Rock', written in a cursive style.

ANTHONY J. ROCK
Brigadier General, USAF
Commandant

Abstract

Historians have debated for decades the reasons for the spectacular failure of the Luftwaffe during the last three years of World War II. As the Luftwaffe went down in flames, the United States Army Air Forces arose to conquer the airspace on the Western Front of Europe. Before its downfall, Luftwaffe tactical airpower was key to Gen Heinz Guderian's surprise attack through the Ardennes to the English Channel in 1940. Similarly, in 1944, as Gen George S. Patton broke out of the Normandy beachhead by unleashing Operation Cobra, tactical airpower proved vital to his ability to march to the German border in only six weeks. This paper analyzes a host of primary sources authored by the main players in those campaigns (Guderian, Patton, and Weyland) and focuses on the key differences between the Luftwaffe support to Guderian and XIX Tactical Air Command support to Patton during their historic campaigns on the Western Front of Europe in World War II.

Preface

I set a goal of utilizing primary sources as the basis for this paper. I wanted to research what the key players wrote or said at the time or later in their memoirs.

But, in addition to finding information relevant to this thesis. I used primary sources to identify some interesting tidbits of history that would have gone unnoticed. For instance, on the inside cover of his war diary from 1944, O. P. Weyland wrote in an undated entry: "Rommel—wounded in France 17 July by F/B died 14 Oct."¹ Since the entry has no amplifying data, it is not possible to determine the context in which Weyland wrote that note, but it is interesting to see that Weyland thought about that particularly famous victim of his deadly fighter bombers.

I found another interesting tidbit while looking at the questions that Weyland had written for intelligence officers to ask captured German field marshal Karl von Rundstedt. At the bottom of a typed page with questions for von Rundstedt—having to do with the United States Army Air Forces' performance versus the Luftwaffe—Weyland wrote in an undated entry, "Russian AF vs Am. AF?"² How interesting it was to see that senior American commanders, shortly after VE (Victory in Europe) Day, were already contemplating a conflict with the Soviet Union. I cannot adequately explain how exciting it was to hold in my hands the actual handwritten war diaries of great Americans and great airpower leaders like Weyland. Enabling me to find these and other gems, the staff of the Air Force Historical Research Agency allowed me unfettered access to the O. P. Weyland Collection.

Introduction

On a foggy morning on 1 September 1939, three Luftwaffe Stukas flew just above the treetops towards the first targets to be struck in World War II. The vanguard for the ensuing German offensive into Poland, the Stukas' target was a pair of railroad bridges over the Vistula River in western Poland. However, the Stukas were not sent to destroy the bridges. Oddly, these precise dive bombers were sent to preserve them for the blitzkrieg of Panzers that were about to pour into Poland. Polish engineers, knowing a German invasion was imminent, had rigged these bridges for demolition to impede the progress of the Wehrmacht. Explosive charges were already placed at the bridges' weak points, with detonation wires running to a control building nearby. The Stukas' mission seemed impossible, for they were to drop bombs at precise locations between the control building and the bridges to cut those demolition wires before the Poles could detonate the charges.

At 4:34 a.m., the three Stukas swooped in and dropped their ordnance on target, cutting all the demolition wires. The Wehrmacht thrust into Poland began one minute later to begin World War II. As the Stukas returned to their base in Prussia, Polish engineers managed to reconnect one set of wires and drop one span into the Vistula, but the other span remained standing for the Panzers to cross.³ This one raid encapsulated the Luftwaffe way of war. Stukas, developed as accurate dive bombers in support of troops on the ground, were not used for close support that morning. Indeed, the Luftwaffe, forever steeped in innovation, had used a tactical platform to achieve strategic success over the Vistula, and it had done it very well.

Tactical Airpower Comes of Age

Few military forces in history have seen such a remarkable turnaround in fortunes as the Luftwaffe experienced in World War II. From its early successes in the Spanish civil war, where the Luftwaffe cut its teeth and gained valuable combat experience, to Stukas firing the first shots of World War II in Poland, the might of the Luftwaffe, like all of Nazi Germany, seemed invincible. Never was the Luftwaffe a more

capable fighting force than during General Guderian's rout of the French army as he charged through the Ardennes to the English Channel. But during Guderian's race across France and the Low Countries, problems in coordination and cooperation between the Luftwaffe and the German army arose. These deep-seated problems, the result of the Luftwaffe's strategic vision of its role in the Wehrmacht, meant that even the vaunted Luftwaffe remained essentially an interdiction only air force, devoid of the ability to perform close support to German armies. In the end, overwhelming force led to the eventual defeat of the Luftwaffe at the hands of both the US Army Air Force (USAAF) and the Soviet Air Force. Yet the lessons the Luftwaffe learned during Guderian's drive across Europe are applicable not only for the 1940s USAAF but to today's Air Force as well.

As the Luftwaffe declined under the sheer weight of the Allied offensives in the west and east, the USAAF arose as the world's finest air combat force. From early missteps in Africa and Italy, the USAAF fighter-bombers mastered close support and interdiction, and, in the process, they became a stanchion of the breakout from the Normandy beachhead and the race to Germany. Indeed, never had the world seen such a fierce and efficient AirLand Battle team. Working in close concert with ground forces, USAAF fighter-bombers waged incessant interdiction and close-support operations against the Wehrmacht, paving the way for Patton's Third Army and others to march to Germany faster than even the most liberal estimates. Both Guderian's drive through France in 1940 and Patton's drive to Germany in 1944 embody the prevailing attitudes and strategy towards the use of tactical airpower by the Luftwaffe and the USAAF. But, while the USAAF overcame doctrinal limitations and capitalized on tactical airpower in the nascent AirLand Battle team, the Luftwaffe remained mired in old strategy, relegating the Wehrmacht airpower to an interdiction only force.

The Luftwaffe: Guderian's Mind-set for Tactical Airpower

Guderian's Panzer campaign across France in 1940 utilized significant tactical airpower for support. That tactical airpower provided by the Luftwaffe, though coordinated with

Guderian's army group, was independent in its application and most closely resembled an interdiction only campaign, as close support was neither desired nor required. This use of tactical airpower, for interdiction only, was rooted in both Guderian's mind-set for warfare as well as in Luftwaffe doctrine.

Guderian's image of airpower in warfare, like most German officers of the era, was rooted in his experiences in World War I. Guderian wrote tellingly of his observations of airpower in the latter stages of World War I. He was particularly influenced by Allied air superiority and its deleterious effects on German units:

It was the ground-attack aircraft that became the immediate threat. The Germans suffered from the attentions of the enemy aircraft on the Somme and at Ypres, and in the course of 1918 the superiority of the Allies in the air became more tangible still. While enemy air raids against the German homeland were rare and not particularly effective, aircraft intervened to significant purpose in the ground battle, as at Amiens on 8 August 1918. They created disorder in the German rearmost communications, they hindered the movement of reserves, they took German batteries under actual attack, they laid smoke-screens in front of occupied ground, and they reported the progress of the attack. All of this was of material influence on the course of the ground fighting, especially when the aircraft were acting in co-ordination with tanks. Aircraft became an offensive weapon of the first order, distinguished by their great speed, range and effect on target. If their initial development experienced a check when hostilities came to an end in 1918, they had already shown their potential clearly enough to those who were on the receiving end.⁴

In short, Guderian was highly impressed with airpower's effect on German forces.⁵ He used these experiences and others to formulate his historic combined arms operational strategy, which he formulated in the interwar years.

Guderian's revolutionary combined arms theory—dominated by the maneuver warfare made possible by the Panzer main battle tanks he lauded—utilized airpower in an interdiction role as a significant source of support. Using tanks as the spearhead for an infantry advance, all supported by artillery and airpower, Guderian's combined arms

theory became the dominant strategy for the Wehrmacht. Discussing the role of the aircraft in his combined arms scheme, Guderian stated that aircraft would be used like artillery to create breaches in lines and fortifications for his Panzers to penetrate. Guderian's warfare model called for a massive attack by artillery and aircraft to create a breach in enemy lines. Guderian stated that ground forces would "need a partner that can exploit breaches formed by aircraft, and can achieve a breakthrough through modern defenses. This partner is the tank."⁶

After tanks exploited the breach in enemy lines, Guderian stated that the most pressing issue was to keep enemy reserves from engaging his tanks, and this interdiction focus became his major argument for airpower use: "Everything comes down to delaying the intervention of the enemy anti-tank reserves and tanks. . . . The best way of delaying the intervention of reserves is through aircraft, and this is probably one of their most important contributions to the ground battle."⁷

Guderian understood how important the interdiction of reserve forces was to his Panzers at their vulnerable point of breakthrough in enemy lines. He wrote that "the immediate responsibility of halting the flow of enemy reserves falls to the tactical aircraft, which must cast aside all other work in favour of intervening in the ground battle at this decisive moment."⁸ Further, Guderian stated that "the air forces must bend their efforts to preventing or at least delaying the flow of those reserves to the location of the breakthrough."⁹ Destroying or delaying enemy reserves before they could be brought to bear on his forces was textbook interdiction, and this type of application of airpower Guderian formulated to support his Panzer breakthroughs. Interestingly, Guderian also stated that long-range artillery could be used with aircraft in that critical mission of delaying and disrupting reserves.¹⁰ It seems Guderian thought of tactical airpower in the same vein as long-range artillery—adequate for interdiction only.

Guderian expanded on the interdiction role of tactical aircraft when he discussed post-breakthrough uses of airpower. He described such specific interdiction targets as road and rail links, movements, assembly areas, and command and control networks.¹¹ Clearly, Guderian felt airpower should

be used for interdiction only, as he never once mentioned close support or strategic targets as worthwhile to attack. Guderian believed and built his forces on the premise that only interdiction was required for his method of attack to be successful—and the only airpower application thus desired.

Guderian heaped praise upon his Panzers, but his lack of discussion on the value of airpower beyond interdiction reflected a certain animosity towards the use of airpower. In fact, Guderian's only mention of airpower in the Polish campaign was to brush aside the Luftwaffe contribution and to say that "thick ground mist . . . prevented the air force from giving us any support."¹² He failed to mention that the Luftwaffe protected the "long, exposed flanks" of the Wehrmacht, the result of maneuver by the German mobile forces, by flying sorties into rear areas of the Polish army.¹³ He also failed to mention that "the efforts of the Luftwaffe . . . were primarily instrumental in preventing the [Polish] Army from inflicting damaging wounds on the rear of the German 8th and 10th Armies during their advance on Warsaw."¹⁴ In discussing his campaign in France in 1940, Guderian remarked that he was aware of a threat to his flank by a spearhead of armor led by Col Charles de Gaulle from the French 4th Armored Division, but Guderian stated that "danger from the flank was slight," and soon the French tanks moved away.¹⁵ Guderian again failed to mention that Luftwaffe Stukas destroyed most of de Gaulle's tanks before they could reach his headquarters.¹⁶ To be fair, perhaps Guderian did not mention the Luftwaffe's role because he did not know where the Luftwaffe was operating. Indeed, as the German army only required the Luftwaffe to fly interdiction well in front of and to the sides of its armored thrusts, the Luftwaffe only had to maintain familiarity with the general situation of the German army.¹⁷

Guderian's libeling of the Luftwaffe's contribution to his success in 1940 continued as he described a perceived lack of air support. During the French campaign in 1940, the Luftwaffe operated as an interdiction force, exactly as Guderian described; yet he often expressed concern that he was not receiving the air support he required. After the absolutely critical crossing of the Meuse River early in the campaign (discussed in detail below), where coordinated airpower was vital to the German thrust out of the

Ardennes, Guderian remarked that “no more support could be expected from the Luftwaffe, which was to be employed elsewhere.”¹⁸ Guderian failed to acknowledge that it was expected that the Luftwaffe was to be employed elsewhere, as the Luftwaffe proceeded to accomplish interdiction in front of his Panzers. He also dryly mentioned an incident near Chéméry, where Stukas attacked one of his armored convoys after the convoy crossed the Meuse. Guderian failed to attribute the unfortunate fratricide to his Panzers’ very rapid advance the previous day.¹⁹ As his forces reached the English Channel, Guderian remarked that “the enemy air force was very active, bombing us and firing their guns at us too, while we saw little of our Luftwaffe. . . . All the same, we managed to force our way into Boulogne.”²⁰ Guderian wrote off the Luftwaffe’s absence as caused by Luftwaffe airfields being located too far in the rear to support his Panzers. However, refuting Guderian’s premise, Williamson Murray argues that German documents noted that the Luftwaffe had set up a forward operating base west of the Meuse four days before Guderian reached Boulogne, saying, “What is remarkable is the speed with which short-range fighter and dive bombers moved forward to support ground forces that were rapidly drawing out of range. By the 17th, within 24 hours of the French evacuation, German fighters were establishing their operational base at Chaleville, west of the Meuse. . . . The system supported the army as well as the air force in its drive to the Channel.”²¹ As his forces paused in accordance with Adolf Hitler’s controversial stop order before moving on Dunkirk, Guderian stated that “fierce enemy air activity met little opposition from our air force.”²² These statements prove that either Guderian was knowingly bashing the Luftwaffe or that he was unaware of their area of operations. As Guderian should have expected them to do, the Luftwaffe was accomplishing its interdiction mission across France and thus was well out of sight, but apparently not out of mind, of Guderian.

Close Cooperation at the Meuse

No one battle encompasses Guderian’s mind-set towards airpower more than the crossing of the river shortly after his Ardennes offensive began. Crossing the Meuse River

was an absolute necessity if the German invasion of Western Europe was to succeed. So tenuous a center of gravity was this crossing that, when discussing it with Hitler and other Wehrmacht leaders during precampaign planning, Guderian noted that "General Busch, who commanded the Sixteenth Army on my left, cried out: 'Well, I don't think you'll cross the river in the first place!'"²³ The crossing of the Meuse was indeed so crucial to the entire campaign that Guderian, his planners, and the Luftwaffe disregarded the prevailing doctrine and decided to utilize the Luftwaffe in a close-support role.²⁴ Indeed, Guderian asked that, in preparation for this one battle, a face-to-face meeting between him and the leader of the close support planes be arranged.²⁵ Guderian spoke of this as highly unusual for the ground commander to interact personally with his close air support commander. In any case, Guderian noted that "co-operation with the Luftwaffe was arranged"²⁶ for the Meuse crossing. He stated that the plan "from the very beginning of the crossing and throughout the whole operation [called for] perpetual attacks" instead of concentrating on one-time attacks typical in prestrike artillery barrages. In this one case, tactical airpower was to be coordinated closely and "time deconflicted."²⁷ Even in this highly coordinated air-ground battle, Guderian could not help but regard that airpower was to be used as a rolling artillery barrage.²⁸ Thus, Guderian again demonstrated that he had no concept whatsoever of the utility of tactical airpower to aid the ground component in achieving battlefield gains. In the end, despite Guderian's lack of airpower vision, the Meuse River crossing resulted in overwhelming success. During the crossing, Manfred Albrecht Freiherr von Richthofen's Stukas and bombers paralyzed French artillery positions, enabling the army to secure a foothold on the French side of the Meuse.²⁹ Guderian's Panzers had broken through yet again.

Guderian's view of airpower was not shared by all in the Wehrmacht. Though the Luftwaffe strove to increase its close support combat capability in the Spanish campaign with leaders like Richthofen charging forward with revolutionary tactics of close support, the Wehrmacht as a whole did not appreciate airpower's role in close support. In fact, though he did not participate in the Spanish Civil War, Guderian certainly studied its outcomes. Most

tellingly, Richthofen stated after the Spanish campaign that Guderian “failed to understand either the capabilities or limitations of air power.”³⁰ Realizing that close coordination leads to essential close support for a mobile mechanized force, Richthofen glumly remarked that despite his efforts in the Spanish campaign, “no progress whatsoever had been made in the coordination of airpower with armored forces.”³¹ Richthofen further stated that he found the army “unteachable” in the close coordination for airpower application.³² Richthofen, never one to shy from a fight in the air or on the ground, blasted the lack of cooperation between the German army and the Luftwaffe, saying, “The Luftwaffe was neither a whore to follow where the army led nor a fire brigade on call to put out even the smallest conflagrations. Hermann Göring was very jealous of his power. . . . [He] consistently refused to let the army . . . exercise command over aircraft beyond those assigned to it for purposes of reconnaissance, liaison, or artillery observation.”³³ So it seems that the tactical Luftwaffe was destined to be an interdiction only force, capable of much, yet missing the critical close coordination required to effect close air support on a fluid battlefield. That interdiction-focused mind-set was similarly reflected in the doctrine senior Wehrmacht leaders published.

German Airpower Doctrine

The Luftwaffe infatuation with interdiction was documented repeatedly in doctrine published in the late 1930s and early 1940s. According to a Luftwaffe general staff directive, “Guidelines for the Operations of Flying Units in Direct Support of the Army,” “The operating area of the Luftwaffe in direct cooperation with the army, in general lies beyond the effective range of our own artillery. Only in this area is the enemy likely to present targets that may be engaged effectively from the air.”³⁴

Further guidance from the same document stated that “only in exceptional cases will it be advisable for air units to engage the forward elements of the enemy forces.”³⁵ Clearly, the Luftwaffe doctrine intended for tactical airpower to provide support to the German army in an interdiction role only, and close support was frowned upon and discouraged.

In addition to restrictions on close support, the Luftwaffe maintained a highly independent mind-set towards air support of the German army. This mind-set, certainly an outgrowth from Göring's tight grip on Luftwaffe assets mentioned by Richthofen, manifested itself in such doctrinal statements as "the requests of the army for direct support can therefore only be complied with if there is a need for bringing about a decisive or immediate result."³⁶ Indeed, though the independent-minded Luftwaffe definitely coordinated its interdiction attacks with the ground commander, the supported/supporting relationship was tenuous at best. Luftwaffe guidance indicated that coordination was suggested and helpful, but not penultimate: "Ideally, the ground troops in whose combat sector the mission will take place should be fully apprised of the mission plans."³⁷ This statement indicates that the Luftwaffe, though more than willing to support the German army, remained staunchly opposed to close coordination, either on the tactical battlefield or in operational headquarters. The result was a German tactical air force that accomplished interdiction and reconnaissance only.

The Luftwaffe's doctrinal roots for tactical airpower in an interdiction only role led to the creation of a separate and inefficient command and control system. The Luftwaffe assigned air commanders called *kolufts* directly to army corps and divisions to control reconnaissance. These missions were entirely under the purview of the German army and wholly separate from the Luftwaffe's chain of command. Addressing these *kolufts*, Luftwaffe doctrine stated that "the most important mission of the air commander of the army and army group is to coordinate the aerial reconnaissance efforts of the [reconnaissance assets] in his assigned operational area."³⁸ To liaise between those same army units and the operational Luftwaffe, another Luftwaffe officer, called a *fliegerführer*, was assigned to establish close cooperation with the army, be familiar with the ground situation, and receive air support requests.³⁹ However, the *kolufts* were also directed to be involved "in the cooperative effort between the army headquarters and the operational air force . . . [as *Kolufts* have] the most thorough and up-to-date information on all air reconnaissance results and thus [are] in a position to continually advise the air force concerning the employ-

ment of air units.”⁴⁰ So both Luftwaffe officers were directed to coordinate between the army and the Luftwaffe; though the fliegerführer supposedly had the authority, the kolufts had more information. Finally, the Luftwaffe even went on to state that fliegerführers were not to be subordinated to kolufts.⁴¹ How confusing and inefficient it must have been to have the Luftwaffe representative with the most knowledge of the battlefield only to advise and not direct the application of tactical airpower. On the tactical level, strides were made to incorporate air liaison officers into the army to provide real-time air support requests, but these measures simply cut out the operational army chain of command, confirming the independent Luftwaffe mind-set. Richthofen “instituted a system whereby air controllers were sent into the forward battle zones to direct air strikes from the ground. The importance of good ground-to-air communication was noted.”⁴² Matthew Cooper believes that “Richthofen’s use of the Air Liaison Detachments . . . had proved invaluable: requests for air support could . . . be radioed directly to [Richthofen’s] headquarters, without having to go through the time-consuming network of frontline division to corps to Luftflotte and back down to Fliegerdivision, and decisions concerning air attack would be decided on the spot.”⁴³

So air support requests either went directly from the field to tactical aircraft or directly from air liaison officers back to the regional Luftwaffe headquarters. By skipping the so-called time-consuming communication network through the army chain of command, Luftwaffe air liaisons deprived the German army operational command chain not only of air support information but also of vital information about the status of their ground forces. Thus, a system set up by Richthofen to support the army in the end was inefficient and misplaced, as the divisions and corps that were the recipients of his air support were eliminated from the decision-making process by the Luftwaffe’s belief in its own independence.

The US Army Air Forces: American Airpower Doctrine

American tactical airpower evolved under the aegis of several US Army field manuals in the 1930s and early

1940s. Tactical airpower doctrine in the USAAF in World War II culminated in Army Field Manual (FM) 100-20, *Command and Employment of Air Power*, a document in which tactical airpower use was ostensibly molded on Royal Air Force and British Eighth Army successes in Africa. Gen Bernard Law Montgomery's British Eighth Army had achieved several decisive victories over Rommel's Afrika Corps, and airpower contributed mightily to the effort. Montgomery valued close cooperation and close support between the Royal Air Force and his army. Montgomery's close cooperation lessons were mostly incorporated into FM 100-20, but they were overshadowed by other priorities of the USAAF. Indeed, the USAAF feared a substantial dilution of operational command and control over air forces by the Army. Thus, instead of a document heralding close cooperation between the air and ground arm, FM 100-20 was met with dismay by the US Army ground forces and was viewed as the Air Force's "Declaration of Independence."⁴⁴ Indeed, in 1943 the War Department published FM 100-20 without the approval of Lt Gen Lesley McNair, chief of Army Ground Forces, who was wholly responsible for training, equipping, and organizing Army forces in the European theater. Ironically, Lieutenant General McNair, also the highest ranking American to die in World War II, was later killed by fratricide during an ill-conceived US heavy- and medium-bomber strike on forward positions at the start of Operation Cobra.⁴⁵

The tactical airpower lessons in FM 100-20 were largely invalidated by independent-minded Army air leaders. FM 100-20 declared essentially that the USAAF was a separate branch of the military. The opening line of this document proclaimed in all capital letters that "LAND POWER AND AIR POWER ARE CO-EQUAL AND INTERDEPENDENT FORCES; NEITHER IS AN AUXILIARY OF THE OTHER."⁴⁶ Given the tension between the US Army and the USAAF, that particular verbiage was probably not the best way to begin a manual intended to be the guide for close cooperation between ground and air forces. Indeed, FM 100-20 just served to expand the rift within the Army ground and air leadership. Additionally, the air force's priorities of operations were listed as the following:

(1) *First priority.* – To gain the necessary degree of air superiority. This will be accomplished by attacks against aircraft in the air and on the ground, and against those enemy installations that the air leaders require for the application of air power.

(2) *Second priority.* – To prevent the movement of hostile troops and supplies into the theater of operations or within the theater.

(3) *Third priority.* – To participate in the combined effort of the air and ground forces, in the battle area, to gain objectives on the immediate front of the ground forces.⁴⁷

The second priority is interdiction, whereby fielded forces are prevented from reaching the battlefield or destroyed in the rear areas by airpower. The original thrust of the document—to outline close support to the frontline forces by tactical airpower—was relegated to the third priority. Further, strikingly similar to Luftwaffe doctrine of the day, the idea of close support was discouraged in all but extraordinary circumstances:

Massed air action on the immediate front will pave the way for an advance. However, in the zone of contact, missions against hostile units are most difficult to control, are most expensive, and are, in general, least effective. Targets are small, well dispersed, and difficult to locate. In addition, there is always a considerable chance of striking friendly forces due to errors in target designation, errors in navigation, or to the fluidity of the situation. Such missions must be against targets readily identified from the air, and must be controlled by phase lines, or bomb safety lines which are set up and rigidly adhered to by both ground and air units. Only at critical times are contact zone missions profitable.⁴⁸

Thus, what began as an effort to capture Allied lessons learned about the successful use of tactical airpower and apply those lessons to American airpower was co-opted by independent-minded air force leaders and morphed into a doctrine that promoted an independent air arm first, rather than close coordination and support on the battlefield. The US Army took this doctrine to battle in Tunisia and was disappointed with the result. Consequently, both air and ground commanders, first in the invasion of Italy and then

in the invasion of France, modified the prevailing doctrine and instead formed the basis for an air-ground battle team with close cooperation, close support, and centralization of planning by Airmen at its heart.⁴⁹ None was more successful in this application than General Weyland, Patton's lead Airman in France. Patton, Weyland's partner in Third Army's air-ground team, also heartily supported the idea that tactical airpower should be commanded and controlled by Airmen.⁵⁰

Patton and Weyland's Air-Ground Team

Unlike Guderian, both Patton and Weyland fully understood the capabilities and limits of tactical airpower on the battlefield. Weyland grasped immediately that his task was to support Patton's drive out of Normandy. At the beginning of Operation Cobra, Weyland stated that "with the advent of Third Army on 1 August, XIX Tactical Air Command took up the task for which it had been created—air support of an army in the Field."⁵¹ That is a stark difference from Guderian's perceived role for the Luftwaffe—to simply provide a breach for his Panzers and delay or disrupt enemy reserves threatening them.

Patton's view of the capabilities and limitations of airpower seems much more advanced than Guderian's. Indeed, upon viewing countless foxholes on the sides of roads for German truck drivers to take cover in during fighter-bomber attacks, Patton commented on the overwhelming effectiveness of Weyland's interdiction forces. However, Patton also remarked that many open fields were pockmarked with crater upon crater, but no destroyed targets lay in their midst, indicating an inability of airpower to always find its mark.⁵² Patton clearly implied that airpower was not a silver bullet but a part of the air-ground team he promoted time and time again. In fact, Patton stated that the "effectiveness of air-ground co-operation is still in its infancy,"⁵³ indicating that he realized that, though formidable, the air-ground team had room for improvement.

Where Guderian did not emphasize close coordination with the Luftwaffe, except of course at the Meuse, Weyland and Patton considered a close air-ground relationship essential.

After seeing firsthand the effects of fighter-bomber tactical aircraft, Patton remarked,

Just east of Le Mans was one of the best examples of armor and air co-operation I have ever seen. For about two miles the road was full of enemy motor transport and armor, many of which bore the unmistakable calling card of a P-47 fighter-bomber—namely, a group of fifty-caliber holes in the concrete. Whenever armor and air can work together in this way, the results are sure to be excellent. Armor can move fast enough to prevent the enemy [from] having time to deploy off the roads, and so long as he stays on the roads the fighter-bomber is one of his most deadly opponents. To accomplish this happy teamwork two things are necessary: first, intimate confidence and friendship between air and ground; second, incessant and apparently ruthless driving on the part of the ground commander.⁵⁴

This is a far cry from Guderian's stinging accusations about the lack of air support from the Luftwaffe. Patton stated, "[T]he Commanding General, or the Chief of Staff of the Tactical Air Command operating with an army, should be present at all staff conferences and planning meetings. If this is not done, the maximum co-operation with this powerful arm will not be obtained."⁵⁵ In fact, Patton praised Weyland for this very cooperation when stating that "General Weyland, who was always present when any decision was made in the Third Army, was equally confident in his ability to support any activities in which we might become engaged."⁵⁶

Weyland also understood the importance of close co-operation between the air and ground arms and attempted to keep his headquarters very close to Patton's. Weyland wrote that "throughout the Campaign every effort was made to locate Tactical Air Command Headquarters in the vicinity of Army, as it was found this was a necessity for best air-ground coordination. However, during mobile phases . . . Tactical Air Command circuits got longer and longer [such that] resultant operations were very unsatisfactory."⁵⁷ To counter the adverse effects of diminished communications during highly mobile phases, Weyland devised a forward headquarters staffed with key officers and portable communication gear that could relay Patton's dictums back to him. Weyland said of his advanced headquarters organization,

"In order to maintain liaison with Army on such rapid advances, Tactical Air Command X-Ray was established to move with Army. This echelon was composed of a few key operations personnel [and] proved sufficient to maintain excellent communication, and hence liaison, between Army and Tactical Air Command (Main)."⁵⁸

He, of course, kept Patton fully in the loop on his ability to keep up with Patton's highly mobile forces. In one instance, even Weyland's austere advanced headquarters was unable to move with Patton's headquarters. Weyland describes his response to this problem in his war diary on 13 August 1944: "Gen Patton agreed that XIX TAC [advanced] should not attempt to move to Le Mans with HQ [HQ Third US Army] in absence of adequate communications. I will send liaison officers forward with [Third US Army] and move radio link to communicate."⁵⁹

The support of rapidly mobile forces required more than robust communications. Like the Luftwaffe, Weyland invested heavily in a support structure to build forward air bases so his fighter-bombers could maintain adequate range in front of Patton's forces. Weyland remarked that "in the course of the campaign on the Continent, XIX TAC operated from forty-three fields" constructed by 2d Brigade of the IX Engineer Command.⁶⁰ Whether his continually moving forward airfields were grass or captured German installations mattered not, as long as Weyland's fighter-bombers could range the enemy ahead of Patton.

At these close coordination meetings, Patton and his ground and air generals discussed long-range plans, occasionally even short-notice requirements. In one example, on the first day of Operation Cobra, on 1 August 1944, Weyland noted in his war diary that "Conference with Gen Patton, Gen Gaffey, Gay and [Third US Army] staff. Reported that 4th Armored Div approaching Rennes and that German armored column was approaching Rennes from SW. Put 3 groups [fighter-bombers] on German column. 90th and 83d Divs to move S out of Avranches tomorrow & 3d Army required air cover over bridges and dams as they are very vulnerable and their destruction would cause debacle. 363 [Group] obtained for this purpose for 2 Aug."⁶¹

Weyland consistently directed his airpower to support Patton's drive across France, often using ingenious and

revolutionary tactics to accomplish his objectives. Weyland even arranged continuous coverage of Patton's lead forces at critical times during the offensive. Weyland described such an event at the start of Operation Cobra, saying "Armored column cover was so arranged as to maintain eight fighter-bombers constantly in the air over each armored division, the eight-plane flights being relieved every hour. Theirs was the double duty of preventing attack by enemy air and of knocking out anything which might hold up the armored column. Planes and tanks worked closely together, talking to each other by VHF radio."⁶²

Though Weyland bent over backwards to ensure that Patton's Third Army received adequate air support, his close relationship and corresponding close cooperation did not mean that he was a yes-man for the Army. Weyland provided just the kind of operational command and control required of an Airman supporting a soldier. In one instance, Weyland wrote in his war diary on 3 August 1944 that "Gen Patton requested [destroyers] or gunboats at St Malo attacked as they are shelling 8th Div troops. Didn't want [heavy bombers]. Due to density of [light] flak I refused to put [fighter/bombers] in at low attitudes. Requesting [medium bombers] from 9 AF for job."⁶³ Clearly, Weyland understood the seriousness of the situation: Army troops were under artillery attack. But Weyland, knowledgeable of both Patton's desired objectives and effects, elected not to take unnecessary risks with his fighter-bombers. Yet he still accomplished the objectives by requesting medium bombers from 9th Air Force.

In addition to assuring close communication and cooperation at the operational and strategic levels, Weyland also created a robust tactical communication system. He wrote that "great strides have been made in the field of communications from the Tactical Air Parties located with groundforce unit headquarters to Tactical Air Command, and between these parties and aircraft."⁶⁴ Further, Weyland wrote that each Third Army Headquarters unit, Armored Division, Infantry Division, and Corps Headquarters was allotted high frequency and very high frequency (VHF) radios in a jeep and half-track.⁶⁵ "The VHF radio is employed for contact with aircraft to direct them to targets . . . and receive flash recce reports."⁶⁶ Along with equipment, Weyland allotted

well-trained liaison officers to each major Army unit. He described that “a flying officer is provided with each party to advise the Ground Force Commander on air matters and to contact the aircraft by radio.”⁶⁷ This was the epitome of air-ground coordination and cooperation. Lauded by Patton, Weyland wrote in his after action report that “the present system is heartily endorsed by Third Army, which is enthusiastic over the liaison and communications provided by the Tactical Air Liaison Officer and the Tactical Air Party.”⁶⁸

Thus, Patton was able to entrust Weyland with significant responsibility for the protection of his forces. As Patton’s tanks spearheaded towards Germany, Weyland demolished the Wehrmacht in front of Patton while simultaneously guarding his flanks. As Weyland recorded in his diary, “During a meeting at 9th AF HQ XIX TAC and 2d TAF to operate North of 3d Army boundary—impede and destroy retreating Germans. IX [bomber command] create road blocks behind retreating Germans to pile them up for [fighter-bombers]. XIX protect R flank of 3d Army, blast the way for armored columns to east and south of Paris.”⁶⁹ His last sentence says it all. Patton and Weyland agreed that XIX Tactical Air Command fighter-bombers should do something no airpower force had yet attempted in history: XIX TAC was to protect the entire right flank of Third Army as Patton drove through the heart of France. Patton entrusted Weyland to do something never before attempted in warfare, and that alone signifies Patton’s innate understanding of both the capabilities and limitations of tactical airpower’s utility to his highly mobile forces. At the same time as Weyland was able to guard the flank of an entire army group with his tactical airpower, he provided Patton with the extra strength he needed to smash his way to Germany well ahead of projections.

Conclusion

It is not difficult to draw parallels between Guderian’s drive to the English Channel and Patton’s drive to Germany. Both commanders possessed an innate sense of mobile mechanized warfare. Both relied on airpower to a certain extent. However, Guderian thought airpower was crucial to gaining a breakthrough for his Panzers and for

interdicting enemy reserves before they could threaten that breakthrough. Patton relied on airpower as a force enabler, allowing him to concentrate his armored drives in a spearhead while tactical airpower guarded his flanks. In the end, Patton relied on the knowledge and leadership of his skilled Airmen like Weyland to enable him to become a mythical figure in American military history. Indeed, the close cooperation between Patton's ground arm and Weyland's air arm became the mainstay of American military might all the way to the present day. Guderian, a highly gifted yet ground-centric master of armored warfare, also felt that tactical airpower should be a force enabler for his Panzers. Yet Guderian's mind-set and resulting strategy utilized tactical airpower in a subservient role, where close coordination was not required, as the Panzers were the mainstay of his military application.

As a result, while the USAAF tactical air commands thrived in the close support role, the Luftwaffe was unable to capitalize on its successes and was relegated to an interdiction only force. The USAAF, due in no small measure to ingenious and innovative leaders like Weyland, was able to overcome its doctrinal limitations and soundly defeat the enemy and in so doing lay the foundation for the future of the AirLand Battle team. In contrast, the Luftwaffe, mired in outdated strategy embodied by Guderian's mind-set of tactical airpower use, squandered an early advantage in tactical airpower technology and became an interdiction only force for the Wehrmacht.

Perhaps the best conclusions are drawn from the lessons that the Luftwaffe learned as it was defeated by the USAAF. Those lessons are encapsulated in reports from captured German officers. No officer understood the larger picture of the Wehrmacht better than one of its most senior leaders, Field Marshal von Rundstedt. Captured after the war, von Rundstedt was interrogated to determine, among other things, how successful the Allies had been in thwarting the German military. Weyland participated in this interrogation process and drafted a series of direct questions to von Rundstedt to gain an understanding of how tactical airpower had affected the Germans. When asked by Weyland if the Luftwaffe had an "Air Force HQ which was closely coordinated with the Ground Force HQ,"⁷⁰ von Rundstedt

replied: "Contrary to the American habit . . . , we unfortunately did not have that . . . we had to go to the Luftwaffe and plead with them."⁷¹ Further, Weyland asked von Rundstedt if "there [was] any interchange of staff officers between Air and Ground Forces."⁷² Von Rundstedt replied that "this was not the practice due to Göring's anxiety to keep the Air Force as an independent branch of the service. Therefore, he did not tolerate such an exchange."⁷³ Clearly, the Luftwaffe's independent mind-set prevented close cooperation within the air-ground team, as typified by Weyland's XIX TAC.

Weyland asked von Rundstedt if the limited liaison elements between the Luftwaffe and German army were adequate to relay air support requests.⁷⁴ Von Rundstedt replied that "in my opinion, it would be better to maintain a system of Liaison officers [*sic*] as you have it. Particularly so, as otherwise you depend too much on the personality of a single liaison officer. The final requests and decision for air supports [*sic*] should be made on Army level and not further down as the picture in its entirety cannot be appreciated by lower echelons."⁷⁵

There can be no greater praise than that of your enemy. Von Rundstedt's acknowledgement that the USAAF air-ground team concept was superior to the independent method between the Luftwaffe and the German army speaks volumes. Finally, Weyland inquired as to the effect of tactical fighter-bombers on the whole of the Wehrmacht. Von Rundstedt's reply is most telling as to the total paralysis Weyland's XIX TAC inflicted, saying, "The tactical attacks in France on railroad and road communications which were devastating. . . . On the roads our convoys or single [motor transport] could not move during the day. We could never count on when a certain division would arrive at its destination. And finally there were the attacks on the troops in the front lines. Withstanding them was an individual test of courage and of nerves."⁷⁶ How sweet it must have been for Weyland to hear firsthand from his former enemy that all his efforts at nurturing an air-ground team had been so wildly successful.

Notes

(Notes appear here in shortened form. See the bibliography for the full text.)

1. Weyland, "Diary," inside cover page.

2. Weyland, "Points to Take Up," 2.
3. Jablonski, *Terror from the Sky*, 21.
4. Guderian, *Achtung-Panzer!* 128.
5. *Ibid.*, 14.
6. *Ibid.*, 128.
7. *Ibid.*
8. *Ibid.*
9. *Ibid.*
10. *Ibid.*, 195.
11. *Ibid.*, 196.
12. Guderian, *Panzer Leader*, 68.
13. Van Creveld, *Airpower and Maneuver Warfare*, 39.
14. Cooper, *German Air Force*, 100.
15. Guderian, *Panzer Leader*, 111.
16. Cooper, *German Air Force*, 116.
17. Van Creveld, *Airpower and Maneuver Warfare*, 49.
18. Guderian, *Panzer Leader*, 104.
19. *Ibid.*, 105.
20. *Ibid.*, 114–16.
21. Murray, *Strategy for Defeat*, 38; and Corum and Muller, *Luftwaffe's Way of War*, 196.
22. Guderian, *Panzer Leader*, 117.
23. *Ibid.*, 92.
24. Van Creveld, *Airpower and Maneuver Warfare*, 49.
25. Guderian, *Panzer Leader*, 98.
26. *Ibid.*
27. *Ibid.*
28. Van Creveld, *Airpower and Maneuver Warfare*, 50.
29. Guderian, *Panzer Leader*, 102–4.
30. Van Creveld, *Airpower and Maneuver Warfare*, 34.
31. *Ibid.*
32. *Ibid.*
33. *Ibid.*, 48.
34. Corum and Muller, *Luftwaffe's Way of War*, 197.
35. *Ibid.*
36. *Ibid.*, 195.
37. *Ibid.*, 198.
38. *Ibid.*, 200.
39. *Ibid.*, 196.
40. *Ibid.*, 210.
41. *Ibid.*, 196.
42. Cooper, *German Air Force*, 60.
43. *Ibid.*, 102.
44. Greenfield, "Army Ground Forces," 47.
45. *Ibid.*
46. War Department Field Manual (FM) 100-20, *Command and Employment of Air Power*, 4.
47. *Ibid.*, 10.
48. *Ibid.*, 11.

49. Greenfield, "Army Ground Forces," 52; and Steadman, "Comparative Look."
50. Spires, *Air Power for Patton's Army*, 312.
51. Weyland, "Twelve Thousand Fighter-Bomber Sorties," 17.
52. Patton, *War as I Knew It*, 178.
53. *Ibid.*, 356–57.
54. *Ibid.*, 108.
55. *Ibid.*, 361.
56. *Ibid.*, 303.
57. Weyland, "Tactical Air Operations in Europe," 16–17.
58. *Ibid.*, 17.
59. Weyland, "Diary," 16.
60. Weyland, "Tactical Air Operations in Europe," 39.
61. Weyland, "Diary," 2–3.
62. Weyland, "Twelve Thousand Fighter-Bomber Sorties," 20.
63. Weyland, "Diary," 5.
64. Weyland, "Tactical Air Operations in Europe," 17.
65. *Ibid.*, 18.
66. *Ibid.*
67. *Ibid.*
68. *Ibid.*
69. Weyland, "Diary," 13.
70. Weyland, "Questions Put to General Field Marshal Gerd von Rundstedt," 1.
71. *Ibid.*, 1.
72. *Ibid.*, 2.
73. *Ibid.*
74. *Ibid.*, 3.
75. *Ibid.*
76. *Ibid.*, 4–5.

Bibliography

- Cooper, Matthew. *The German Air Force, 1933–1945: An Anatomy of Failure*. New York: Jane's, 1981.
- Corum, James S., and Richard Muller. *The Luftwaffe's Way of War: German Air Force Doctrine, 1911–1945*. Baltimore, MD: Nautical & Aviation Pub., 1998.
- Greenfield, Kent Roberts. "Army Ground Forces and the Air-Ground Battle Team, Including Organic Light Aviation, Study No. 35." Washington, DC: Historical Section–Army Ground Forces, 1948.
- Guderian, Heinz W. *Achtung-Panzer! The Development of Armoured Forces, Their Tactics and Operational Potential*. London: Arms and Armour, 1992.
- . *Panzer Leader*. New York: Dutton, 1952.
- Jablonski, Edward. *Terror from the Sky*. Garden City, NY: Doubleday, 1971.
- Murray, Williamson. *Strategy for Defeat: The Luftwaffe, 1933–1945*. Maxwell Air Force Base (AFB), AL: Air University Press, 1983.
- Patton, George S. *War as I Knew It*. Boston, MA: Houghton Mifflin Co., 1947.
- Spires, David N. *Air Power for Patton's Army: The XIX Tactical Air Command in the Second World War*. Washington, DC: Air Force History and Museums Program, 2002.
- Steadman, Kenneth A. "A Comparative Look at Air-Ground Support Doctrine and Practice in World War II." Fort Leavenworth, KS: US Army Command and General Staff College. <http://www.cgsc.army.mil/carl/resources/csi/steadman/steadman.asp>, 1982.
- Van Creveld, Martin L. *Airpower and Maneuver Warfare*. Maxwell AFB, AL: Air University Press, 1994.
- War Department Field Manual 100-20, *Command and Employment of Air Power*. Washington, DC: US Government Printing Office, 21 July 1943.
- Weyland, O. P. "Diary, Jul 29, 44–May 18, 45." USAF Collection, Air Force Historical Research Agency (AFHRA), Maxwell Air Force Base, AL.
- . "Points to Take Up with General Field Marshal von Rundstedt," 1 June 1945. USAF Collection, AFHRA.

- . “Questions Put to General Field Marshal Gerd von Rundstedt by Major General O.P. Weyland, C.G. of Ninth Air Force, at Bad Kissingen on 2 July 1945.” 2 July 1945. USAF Collection, AFHRA.
- . “Tactical Air Operations in Europe: A Report on Employment of Fighter-Bomber, Reconnaissance and Night Fighter Aircraft by XIX Tactical Air Command, Ninth Air Force, in Connection with the Third US Army Campaign from 1 August 1944 to VE Day, 9 May 1945.” 19 May 1945. USAF Collection, AFHRA.
- . “Twelve Thousand Fighter-Bomber Sorties: XIX Tactical Air Commands First Month of Operations in Support of Third US Army in France,” 30 September 1944. USAF Collection, AFHRA.