THE ORIGIN OF CENTRALIZED CONTROL AND DECENTRALIZED EXECUTION

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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

THE ORIGIN OF CENTRALIZED CONTROL AND DECENTRALIZED EXECUTION, by MAJ René F. Romero, 108 pages.

Air Force Doctrine Document 1 states, “Air forces must be controlled by an airman who maintains a broad perspective in prioritizing limited assets across the range of operations.” Hence, “centralized control by an airman” becomes the essence of airpower's basic tenet, centralized control and decentralized execution. This study concentrates on the origin of U.S. airpower's core tenet, especially with regard to its essence. The search ultimately evolves into an analysis of the doctrinal evolution of centralized control by an airman from World War I through early World War II.

The search begins with the American military experience in the Allies' North African campaign in late 1942, the turning point for the adoption of airpower’s core tenet. After an ineffective application of airpower culminating in the Allies' defeat at Kasserine Pass, centralized control of air forces by an airman became codified into official doctrine. This study attempts to find the origin by examining the events surrounding the American Air Service's first combat experience in World War I, the Battle of St. Mihiel. Next, it examines what the classical airpower theorists concluded about centralized control by an airman as a means to determine what shaped the interwar doctrine with which Army Air Forces entered World War II.

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TABLE OF CONTENTS

Page

ACRONYMS

AAC	Army Air Corps
AAF	Army Air Forces
ACTS	Air Corps Tactical School
AEF	American Expeditionary Force
ASC	Air Support Command
ASTS	Air Service Tactical School
FM	Field Manual
JFACC	Joint Forces Air Component Commander
GHQ	General Headquarters
NAAF	Northwest African Air Forces
RAF	Royal Air Force
RFC	Royal Flying Corps
RNAS	Royal Naval Air Service
TR	Training Regulation
US	United States
USAF	United States Air Force

ILLUSTRATIONS

CHAPTER 1

INTRODUCTION

> I think the best way to describe our operations to date is that they have violated every recognized principle of war, are in conflict with all operational and logistical methods laid down in text-books, and will be condemned, in their entirety, by all Leavenworth and War College classes for the next twenty-five years.[1]
>
> Lieutenant General Dwight D. Eisenhower

After the dawning of the industrial age a number of technological marvels changed the face of warfare. Among these the aircraft is arguably the greatest. Since Orville and Wilbur Wright successfully conducted their first sustained powered flight on 17 December 1903, the aircraft has grown in prominence in its wartime role. Within fifteen short years, Colonel William “Billy” Mitchell would lead an air armada of some 1,400 Allied aircraft in the greatest air battle of the First World War, the Battle of St. Mihiel. The emergence of the aircraft gave military might a new instrument of war, airpower. In the years between the First and Second World Wars, as aircraft improved their capabilities and airmen their skills, airpower advocates struggled to develop doctrine and to prove to naysayers the inevitability of decisive warfare in the third dimension. Nations around the world developed fledgling air forces and by the late 1930s, these air forces were poised to make great contributions to the outcome of the Second World War and beyond.

Historically, armies adopt and refine doctrinal and technological innovations through the hard lessons of war. Defeat and blood are often the catalysts for change. The evolution of the proper use of airpower has been no different. Despite airpower's climb to

prominence and its great strides in capability, even today, the debate continues over its proper application. Who should own it? Where should it be applied on the battlefield? The answer to the first question dictates how the second is answered, and it is from this vantage point that the debate rages, because soldiers and airmen conceptualize the battle space differently from each other. Even today, from the classrooms of the Army Command and General Staff College, student corps and division commanders argue, "Why can't we have our own air support?" Lessons learned from early experiences in World War II should have put this question to rest. Yet, it is still alive and well in the minds of young field-grade Army officers today. Have airmen not done a good job of advocating airpower's unique flexibility and capability? Or do soldiers simply refuse to see beyond the tactical battlefield? To attempt to answer these questions, the author will examine some historical applications and the doctrinal origin of airpower's basic tenet.

American airmen trace their roots of independence to the battlefields and skies over North Africa beginning in 1942. It is there that the seeds of an independent United States Air Force (USAF) were born, when General Eisenhower centralized control of Allied air forces under an airman, giving air commanders equal footing with ground commanders in the command structure of the Northwest African Air Forces (NAAF). This command restructure reinforced the idea that to maximize its inherent capabilities, airpower should be controlled by the airman. This concept is enduring and over sixty years later, airpower's core tenet is: centralized control and decentralized execution, but dissenters remain.[2]

The American experience in Operation Torch, plus the subsequent push across North Africa, is undoubtedly the turning point for the adoption of airpower's core tenet.

Unfortunately for the Allies, this early experience in World War II included their deadly defeat by the Germans at Kasserine Pass in February 1943.[3] For Americans it was their first test in battle against the Axis forces. However, their defeat, costly in lives and equipment, was the price paid for doctrinal deficiencies. The ensuing change in doctrine is generally regarded as the foundation of airpower's birth as an independent arm, free from the constraints of direct control by the land force commander. The problem is the United States (U.S.) military had to learn it the hard way.

The U.S. Army Air Forces (AAF) should have codified its core tenet, centralized control, and decentralized execution, prior to its involvement in World War II. In an attempt to uncover supporting evidence, this study will investigate the origin of American airpower's core tenet by first examining Operation Torch through the Battle of Kasserine Pass. In particular it will examine Twelfth Air Force's role and command structure during the campaign. Next, this study will examine American's first experience with major air battle, the Battle of St. Mihiel in World War I. Colonel Billy Mitchell, Commander of the Air Service of the American Expeditionary Force (AEF), commanded the largest air armada ever assembled at the time. This study will examine the command structure of the Air Service of the AEF, the Air Service's contributions to the battle, and doctrinal lessons learned. Lastly, this study will investigate the basic doctrinal theory of classical airpower theorists and their effect on doctrinal development during the interwar years between World Wars I and II. What did these theorists proclaim about centralized control by airmen? Was the concept of centralized control by an airman present within the framework of interwar doctrinal development? By investigating these events and interwar

doctrinal development, it may be possible to determine if the AAF could have codified centralized control by an airman prior to entry into World War II.

The origin of centralized control and decentralized execution is an important topic because its implications are still relevant in today's joint environment. Compared to land and sea power, airpower is a relatively young instrument of war. The USAF gained its independence from the Army in 1947, but has spent much of the time since defining itself as a separate and distinct military arm with a mission capable of independent, decisive effects, not simply relegated to supporting the ground scheme of maneuver. Over the course of its independence, the USAF has endeavored to prove its worth as a force best applied when controlled by an airman and capable of influencing all three levels of war: tactical, operational, and strategic. The struggle over centralized control by an airman has continued despite the advent of the joint forces air component commander (JFACC) concept, codified into joint doctrine in 1986. Despite codification, the JFACC concept was not wholeheartedly accepted by the other services. With the overwhelming success of the air war over Iraq during the first Gulf War, the Army, Navy, and Marines finally supported, at least overtly, the JFACC concept of operations as an effective means to execute the air war.[4] Today, USAF doctrine states, "Centralized control and decentralized execution of air forces are critical to force effectiveness. Air forces must be controlled by an airman who maintains a broad perspective in prioritizing limited assets across the range of operations."[5] However, there are still those who misunderstand airpower's inherent flexibility, and until military thinkers and practitioners, airmen and soldiers alike, are able to understand and articulate the effective application of airpower in the joint environment, this issue of centralized control and decentralized execution will

always be important and relevant. That is where the military stands today. What events set the stage for this doctrine?

Allied North African Campaign

Prelude to World War II

The two decades following the First World War were marked by a strong sentiment of isolationism in the U.S. The horrific events; staggering numbers of dead, wounded, and missing soldiers; and the numerous other sacrifices the nation paid for victory were indelibly etched in the American psyche. Millions were left dead and although U.S. casualties were comparatively small, Americans generally wanted no part of another major European war. They never again wanted to send their sons to Europe, or anywhere else for that matter, to fight someone else's war. Besides, Americans were busy dealing with the effects of the Great Depression and other domestic problems of the day.

Given this isolationist sentiment and the domestic constraints of the day, it is no wonder Americans were ill prepared for the next world war. The U.S. military declined in both numbers of men and equipment during the 1920s and 30s. For example, in 1920, though authorized 280,000 troops, the Army totaled a mere 130,000. That same year, the National Guard, authorized 450,000 troops, had approximately 100,000. By 1939, even though authorized 210,000, Army troops totaled merely 190,000. Lacking even basic war-fighting equipment from airplanes and tanks to antiaircraft artillery guns and .50-caliber machine guns, the Army could not employ even one combat-ready division.[6] Faced with the gargantuan task of mobilizing for a two major theater war, the U.S. would have to perform a miracle to ready itself to fight and defeat both Germany and Japan.

Unprepared in troops and equipment, surely doctrine, not just airpower doctrine, lagged as well.

Doctrinal development stagnated with the depletion of equipment and manpower. Not only were basic war-fighting materials lacking, but also the Army was slow to adopt technological advances too. Even with advancements in aircraft, machine guns, tanks, and artillery, the doctrine of the 1930s still reflected experiences from the last war. Rifled infantry, with modern-day equipment in support roles, employing frontal assault tactics, was the centerpiece of 1930s doctrine.[7] The doctrinal and technological void had grown so immense, even the Third Army commander, following an exercise conducted in 1938, reported the "continuing usefulness of the horse cavalry."[8] Such was the state of military affairs, before the U.S. entered the Second World War. Fortunately, President Roosevelt had the foresight to lead the country in preparation for the inevitable. As the U.S. rushed to organize and train for war, Hitler waged war in Europe. Ultimately, to defeat the Axis powers, Roosevelt and Churchill made it clear that Hitler's Germany was the linchpin.

Britain had been actively engaged with Germany in the Western Desert of North Africa. The British had been fighting the Italians, an Axis power aligned with Nazi Germany, in North Africa since 1940. In 1941 Hitler sent General Erwin Rommel, who ultimately would command *Panzerarmee Afrika,* consisting of all German and Italian combat divisions in the region, to aid Italy. Italian dictator, Benito Mussolini, directed operations for the campaign, but German Field Marshall Albert Kesselring provided coordination between Rommel, German high command, and Mussolini's staff. By June of 1942 Rommel attacked and pushed the British forces back to El Alamein, Egypt. British Generals Sir Harold Alexander, commander of British Middle East Forces, and Sir

Bernard E. Montgomery, commander of British Eighth Army, stopped the subsequent eastward attack in August and successfully counterattacked in October. Their counteroffensive caused Rommel to retrograde and withdraw his forces across the desert into Libya.[9] As this was happening Operation Torch was about to kick off. It began in November 1942 with the Allies, led by the U.S., invading French Morocco and Algeria. The goal of Operation Torch was to completely oust Rommel's forces from North Africa. With Rommel in full retrograde, Montgomery pursued from the east and the Allies squeezed him from the west.

Operation Torch

The Combined Chiefs of Staff of the U.S. and Britain, headed by General George C. Marshall and British General Sir Alan Brooke, chose General Dwight D. Eisenhower to be Commander in Chief, Allied Force. Eisenhower's second in command was General Mark W. Clark. The invasion plan, Operation Torch, was divided ultimately into three task forces, although the original plan only called for two. Major General George S. Patton commanded Western Task Force, Major General Lloyd R. Fredendall commanded Center Task Force, and British Lieutenant General Kenneth A. N. Anderson commanded Eastern Task Force. Because Eastern Task Force would not be making an amphibious assault, Eastern Assault Task Force, commanded by Major General Charles W. Ryder, was formed. The air commanders, Brigadier General James H. Doolittle and British Air Marshall Sir William L. Welsh, commanded the Western and Eastern Air Commands, respectively. Doolittle, chosen to stand up Twelfth Air Force, supported Operation Torch under the designation of Western Air Command. The original invasion plan altered to

Eisenhower's satisfaction, called for an Atlantic coast assault, the third task force. Hence, Western Air Command (Twelfth Air Force) was reorganized with Colonel Lauris Norstad commanding the air support for Center Task Force and Brigadier General John K. Cannon commanding those air forces assigned to Western Task Force. Although Doolittle retained advisory control, Twelfth Air Force was essentially fragmented, as depicted in figure 1, between two task forces under the direct control of ground commanders.[10]

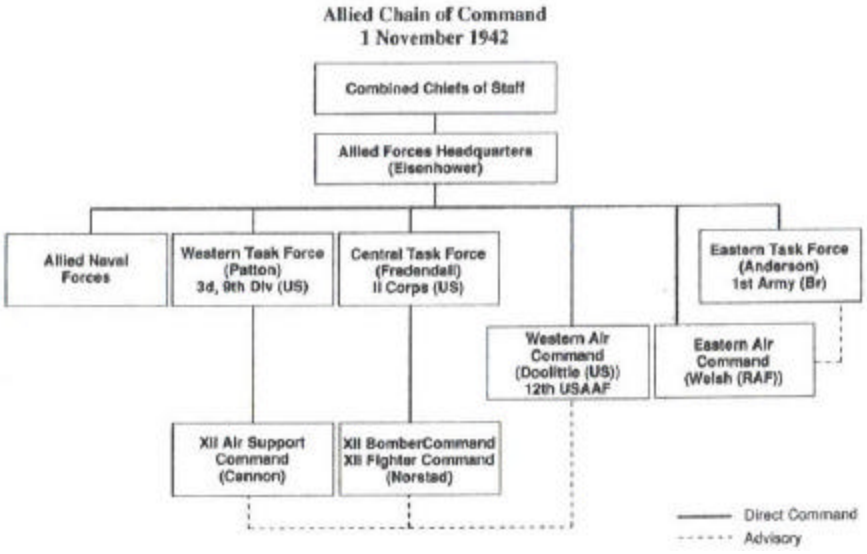

Figure 1. Allied Chain of Command, 1 November 1942. *Source:* David Syrett, "The Tunisian Campaign, 1942-43," in *Case Studies in the Development of Close Air Support,* ed. Benjamin Franklin Cooling (Washington, DC: Office of Air Force History, 1990), 163.

On 8 November 1942 the Allied invasion began. Center Task Force stormed four beaches situated on either side of the city of Oran, Algeria. To gain air superiority, the plan was for an airborne drop near the two airfields Tafaraoui and La Sénia, south of

Oran. Armored columns, once clear of the established beachhead, would support the airborne assault from counterattack. Carrier aircraft would bomb and strafe the French airfields and shoot down airborne French aircraft too. Once the airfields were secured, designated Twelfth Air Force aircraft would make their way into Algeria from Gibraltar and set up a base of operation.[11]

Not knowing how the French would react to the American invasion of Algeria, Center Task Force actually approached one of the beaches with shouts from loudspeakers, "*Ne tirez pas!* [Don't Shoot! in French]."[12] The French responded with a barrage of machine-gun fire, making it clear that the French decided to resist the Allied invasion force. The Allied Plan War was in effect. With failed efforts until the very last minute to avert resistance, the Allies were forced to enact their plan for nonpermissive landings. Forced by French reaction, this last-minute decision to enact a hostile invasion plan had ripple effects.

Composed of thirty-nine C-47s, the airborne assault did not fair well. Having taken off before knowing to execute Plan War, as opposed to Plan Peace, the airborne force proceeded to its objective with incomplete information. The airborne C-47s never received an update to the invasion plan. The offshore HMS *Alynbank* repeatedly failed to notify the C-47s, because the *Alynbank* radio operator was using the wrong frequency. Of the thirty-three C-47s that finally landed near Oran, only fourteen arrived in good condition at Tafaraoui airfield. Yet, in a little over two days, despite this and the uncertainty of the French reaction, the Center Task Force successfully seized Oran in an effort totally made possible through combat arms.[13] The outcomes of the Eastern and Western Task Force landings would be decided by other means.

The Eastern Task Force, largely British, landed at Algiers with the tasks to seize ports and airfields providing a base for the invasion of Tunisia, to extend eastward capturing more ports and airfields and to extend westward to connect with the Center Task Force.[14] The plan called for landing at three beaches in the area. Once airfields were secured, Royal Air Force (RAF) fighters attached to Eastern Air Command would provide air defense and air support missions.

The Eastern Assault Force encountered resistance as it stormed the beaches. A subtask force consisting of a battalion of over 700 men on two British destroyers attempted to enter the Algiers harbor, to storm the dock, and to prevent the sabotage of French ships. In the harbor assault, one of the destroyers had to limp back out to sea early in the invasion after being struck by a coastal battery shell. About half of the battalion was able to get ashore, but in an attempt to survive the coastal battery shelling, the second destroyer had to subsequently run for the sea too. The remaining forces were taken prisoner. Hostilities ended when Admiral Jean Francois Darlan, Commander in Chief of the Armed Forces of Vichy France, who happened to be in Algiers during the invasion, negotiated for a cease-fire and an end to the bloodshed.[15]

The Western Task Force plan called for landings on beaches in Morocco in the vicinity of Safi, Fedala, and Mehdia, then attack Casablanca, and seize the airport at Port Lyautey and the airfield at Salé. By early morning on 10 November, the subtask force charged with seizing the airport at Port Lyautey finally seized their objective. By the morning of 11 November, forces from the Safi landing had fought their way to within forty-five miles of Casablanca to support the impending attack from General Patton's Western Task Force. Heavy surf at Fedala caused a delay in the buildup of forces ashore

and further delayed the assault on Casablanca. Despite the heavy sea state, three infantry companies came ashore and took control of the town early on D day.[16] By the following morning, French resistance terminated as it had for the Eastern Task Force in Algiers. Vichy French forces in Morocco and Algeria had decided to yield resistance and join the Allied advance eastward. Regardless, Patton ordered his forces to flow to Casablanca immediately and fire upon anyone who got in their way. Figure 2 illustrates the Allies' landings in North Africa.[17]

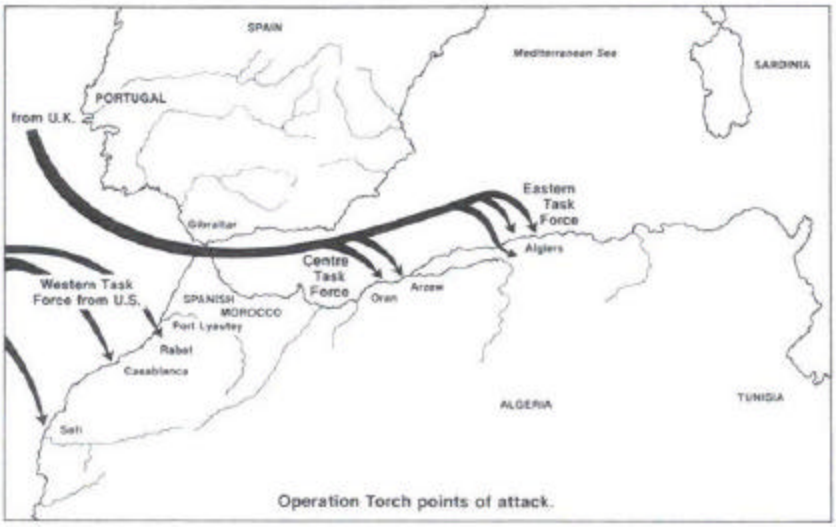

Figure 2. Operation Torch Points of Attack. *Source:* William B. Breuer, *Operation Torch: The Allied Gamble to Invade North Africa* (New York, NY: St. Martin's Press, 1985), 85.

The Allied invasion was by no means an easy task. The American forces were green, undermanned, and undertrained. American generals admitted after the war that it was a blessing that the French initially resisted the invasion. The resistance provided a

proving ground for the Allies, especially the American forces, who were in no way ready to fight the battle-hardened Nazis.[18] The proving ground was not without a price. The beach landings ended with over 1,400 American casualties, including 556 killed, 837 wounded, and 41 missing. The British and French suffered 300 and 2,500 casualties, respectively. Additionally, the French navy lost ten destroyers, four submarines, and a cruiser. The landings complete with mixed results, the Allies gathered their forces for the next step. Joined by a new ally, the American and British forces headed east to meet Rommel.

Onward toward Tunisia

The Allies decided not to establish a beachhead in Tunisia, as part of their initial thrust into North Africa. This allowed Hitler to reinforce the Axis bridgehead at Tunis. He put General Juergen von Arnim, fresh from the Eastern Front in Russia, in command of the field-army-sized force. The bridgehead extended from Bizerte to Tunis on the northeast coast of Tunisia. Von Arnim's goal was to maintain the Axis foothold in Tunisia and link with Rommel's retreating forces.[19] By January 1943, von Arnim had 45,000 troops, 200 tanks, and approximately 1,000 aircraft, of which a little over one-half were operational.[20]

Meanwhile, the Allies made their way across Morocco and Algeria inching ever closer to Tunisia. The Allies established a foothold at the port of Bône, Algeria, within range of northern Tunisia and the Axis beachhead. More paratroops were dropped on airfields at Bône, Souk-el-Arba, and Youks-les-Bains. By 19 November Twelfth Air Force had four fighter groups, a light bomber squadron, two troop carrier groups, and two

B-17 squadrons in western Algeria. Unfortunately, their location, well outside of hostilities, rendered them largely ineffective, as Allied units were spreading themselves throughout central and eastern Algeria.[21] By this time, the Germans were moving out of northern Tunisia to establish a front against the approaching Allied forces from the west. Meanwhile, Rommel was still making his way to southern Tunisia, stalling the advancing British Eighth Army from the east.

Through the last month of 1942, Allied air forces picked up the pace of operations. Night patrols over ports netted thirty-two enemy fighters during November and December. During the same period, Twelfth Air Force bombers dropped 1,300 tons of bombs on over seventy-eight missions. However, on 20 and 22 November, Twelfth Air Force suffered one of its first major setbacks. Enemy aircraft attacked the airbase of Maison Blanche. In the attack, one B-17, two P-38s, six Beaufighters, and four Spitfires were destroyed. Others were damaged, but more damaging was Twelfth Air Forces' decision to leave Maison Blanche and return to Tafaraoui, where they had been two weeks earlier.[22]

Problems for Twelfth Air Force mounted. It was hampered by poor-operating locations, inadequate logistics, and an endless barrage of enemy fighters and bombers. By the end of November, the Allies advanced to Djedeida, twelve miles from Tunis, but poor weather hampered further advance. Aggravating the Twelfth Air Force problems, the ground troops had moved out of effective range of fighter coverage and every time the Allies attempted to land at forward bases, enemy fighters hindered their progress often turning them back. Operating from the rear, British Spitfires only had enough endurance to maintain five to ten minutes of coverage over the battle area and even though,

American P-38s had longer endurance, there simply were not enough P-38s to be effective against the enemy. The Germans had both numerical superiority and safe haven operating from locations in Sardinia and Sicily.[23]

Meanwhile, Doolittle's Twelfth Air Force battled the enemy in an ever-widening battle area making it extremely difficult to provide effective air support. In an effort to overcome operational difficulties, namely poor air-ground coordination and allocation of air assets, Doolittle experimented with restructuring the Allied air forces in late 1942. In early December, Doolittle partitioned his air forces across North Africa. He assigned XII Fighter Command to the area east of the Algerian-Tunisian border. He assigned XII Bomber Command the area from Bougie, Algeria, to the border of Tunisia. This left the west of Cape Ténés to Oujda and the border of Spanish Morocco to the Western Algerian Composite Wing. The Moroccan Composite Wing operated its forces out of Casablanca. The XII Fighter Command's mission was to provide area air defense, escort, and harbor protection. By January 1943, Twelfth Air Force had 755 assigned aircraft, of which 520 were operational.[24]

More importantly, Doolittle recognized the need for centralized control of air resources under an airman. Meanwhile, Twelfth Air Force's problems attracted the attention of Air Chief Marshal Sir Arthur Tedder, who also suggested to Eisenhower that Allied air forces be centralized. Tedder's clout as Air Officer Commander in Chief of Middle East Command was made stronger in that he had worked effectively with Montgomery in defeating Axis air forces in the Western Desert. In response to the growing case for centralized control, Eisenhower placed Major General Carl A. Spaatz in charge of all Allied air forces (figure 3) and consolidated his tactical air forces into Allied

Air Support Command (ASC), placing his tactical airpower under the control of one airman, Brigadier General Lawrence S. Kuter. Under the guidance of a centralized air commander, Spaatz was in a much better position to affect change.[25]

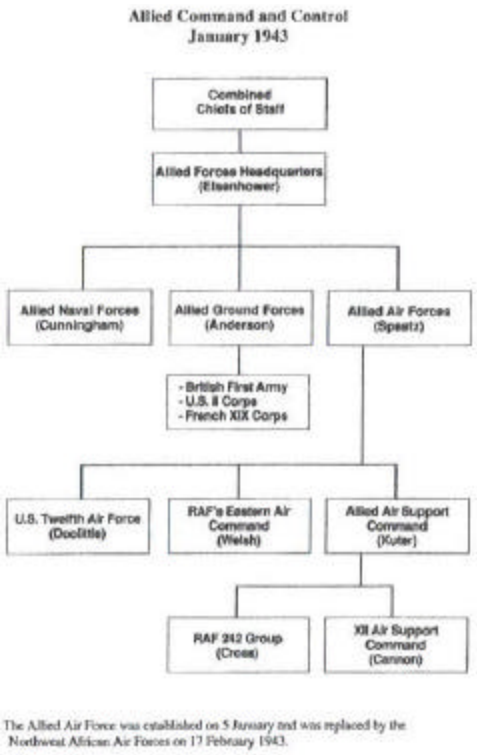

Figure 3. Allied Command and Control January 1943. *Source:* David Syrett, "The Tunisian Campaign, 1942-43," in *Case Studies in the Development of Close Air Support*, ed. Benjamin Franklin Cooling (Washington, DC: Office of Air Force History, 1990), 166.

Kasserine Pass

Eisenhower's planned offensive into the Tunisian cities of Tunis and Bizerte had to be called off when the rainy season in late December hampered any further movement east. With the lull in activity von Arnim assembled his forces and planned a move to

expand his foothold in eastern Tunisia. The Grand Dorsale Chain, an extension of the Atlas Mountains in North Africa, runs north to south in Tunisia. Four major passes on the Eastern Dorsale include: Pichon, Fondouk, Faid, and Rebaou. In mid-December von Arnim captured Pinchon and in early January, he pushed the French out of Fondouk. As von Arnim scrambled to secure more passes, Rommel pushed closer. By early February, all of Rommel's forces were in Tunisia, in an area known as the Mareth Line.

The Allies, arrayed in western Tunisia with British First Army mainly in the north and U.S. II Corps rushing to the south to bolster French forces, were jockeying for position. The poorly equipped French units tried to hold the remaining passes. Knowing the Axis was planning a push westward through these passes, the Allies scrambled to meet the threat. The scramble left II Corps' forces spread thin. On 30 January, von Arnim struck the meager French forces and overran them at Faid and Rebaou Passes. A portion of II Corps' 1st Armored Division attempted to counterattack at both passes, but failed in its attempt. The Axis forces had gained control of all four major passes.[26]

To counter the Axis movement, by mid-February the Allies had positioned their forces in blocking positions west of Faid and Rebaou. Additional troops were also positioned on hills north and south of Faid and in the village of Sidi bou Zid. More of II Corps units were dispersed at Sbeitla and near Fondouk. Additionally, infantry and tanks were protecting Thelepte airfields and blocking the road from Gafsa, near Feriana. In reserve, II Corps kept artillery and tank-destroyer battalions located near Tebessa with the corps headquarters. Allied planners, believing an attack was imminent in northern Tunisia on the British southern flank, again rearranged forces to counter the assault.

Instead of attacking in northern Tunisia, von Arnim and Rommel executed a two-prong attack in the south on Sidi bou Zid and Gafsa.[27]

On 14 February von Arnim's forces surged through Faid isolating the II Corps blocking positions. Attempts to rescue the isolated American forces were unsuccessful. The II Corps units at Sidi bou Zid lost most of their tanks in the process, causing some American forces to withdraw to Sbeitla. After an appalling number of casualties, initially estimated at 1,500 men missing, U.S. forces in confusion and disarray, the Americans reconstituted at Sbeitla and prepared to counterattack the following day. The French prepared to defend at Sbiba Pass, and the Americans prepared to defend at Kasserine Pass. The following day, German dive-bombers, tanks, and battle-hardened troops defeated the U.S. counterattack. The stranded blocking units west of Faid and Rebaou made an attempt to escape during the night of 16 February, but most ended up in enemy hands. Meanwhile, as American units had abandoned Gafsa for reinforcement elsewhere, Rommel established himself there. On 17 February von Arnim's forces pushed through Sbeitla, causing the American units to panic and evacuate the town. The 1st Armored Division left Sbeitla and headed toward Thala through the Kasserine Pass. Due to the approaching German forces, Twelfth Air Force aircraft were forced to abandon the airfield at Thelepte. Rommel in Feriana and von Arnim in Sbeitla, the axis forces threatened to push the Allies back across the western Dorsale and out of Tunisia.[28]

The II Corps, after covering the withdrawal, set up defensive positions on both roads leading to Thala and Tebessa beyond the Kasserine Pass. Initially stopped at Sbiba, Rommel put his main effort at Kasserine. On the morning of 19 February, with Rommel in control of von Arnim's 10th and 21st Panzer Divisions, he attacked at Kasserine. His

goal was to stretch the Allies and push them back beyond Tebessa on the road west of Kasserine Pass. Meanwhile, more American forces poured into the pass for reinforcement. The following day through 21 February, Rommel again probed into Sbiba without success, but at Kasserine, he pushed the Americans to their last line of defense outside of Thala and made gains toward Tebessa. Again, the French stopped Rommel's forces at Sbiba. Allied units from all over Algeria rushed to the Kasserine Pass to bolster defenses. On 22 February, the Allied buildup was sufficient enough to stall the German offensive toward Thala, but to further complicate the problem, von Arnim attacked in the vicinity of Pinchon. Allied forces at Sbiba shifted toward Thala to block Rommel's advancing forces. Fortunately for the Allies, Rommel, after conferring with German leadership, called off the offensive and began his withdrawal back through the Kasserine Pass.[29]

With Montgomery's Eighth Army closing near the Mareth Line in southern Tunisia and competing interests between von Arnim and Rommel, the Axis push abruptly ended. Of the approximately 30,000 II Corps troops at Kasserine Pass, 300 were killed and nearly 6,000 were wounded or missing. Additionally, 183 tanks, 104 half-tracks, 208 artillery pieces, and 512 vehicles were destroyed. The U.S. forces were in such disarray that they did not even attempt to pursue Rommel's retreating army. Between early November and 18 February, Twelfth Air Force lost 184 aircraft. The U.S. first major encounter with German forces, marking its entry into the Second World War, was a major defeat. Luckily for the Allies, the Germans called off the attack and retreated to eastern Tunisia.[30]

Twelfth Air Force Support to North African Campaign

During planning for Operation Torch, planners parceled out Allied air forces to the supported American and British ground forces. British Eastern Air Command supported British 1st Army, and Twelfth Air Force was directed to support all U.S. land forces, which were initially split into two other task forces. Remember, once a decision was made for three task forces, Doolittle had to find a way to support Patton's Western Task Force. On 17 September, XII ASC was activated and after the landings, specifically charged with supporting II Corps all alone. Geographically separated from the rest of Twelfth Air Force, this situation further exaggerated the idea of ASC's subordination to II Corps. On D day, Twelfth Air Force provided very little activity, because a shortage of fuel and supplies stalled offshore due to heavy sea states. So, carrier-based aircraft provided most of the early air support.[31] From November 1942 through January 1943 the Allied Air Force, Twelfth Air Force comprising the majority of it, proved largely ineffective against the German Luftwaffe. Additionally, following Eisenhower's reorganization, Spaatz tried to grapple with the problems of ineffective close air support. Even after placing additional assets under XII ASC, air support to ground forces was still largely unsuccessful. A number of factors weighed on this ineffectiveness.[32]

First and foremost, XII ASC was operating under vague doctrine, Field Manual (FM) 31-35, *Aviation in Support of Ground Forces*, dated 9 April 1942. FM 31-35 stated, "The most important target at a particular time will usually be that target which constitutes the most serious threat to the operations of the supported ground force. The final decision as to the priority of targets rests with the commander of the supported unit."[33] Essentially, the entire operation was organized and executed with this doctrinal

statement in mind. Army commanders translated this to mean the complete subordination of air forces to ground forces. Hence, the initial command organization described above.[34]

Secondly, the Allied air force failed to gain air superiority prior to the ensuing operation. This would be the only time in U.S. history that its land forces would have to endure a fight without it.[35] Air superiority is essential to effective ground operations. Without it, ground forces are left to the mercy of opposing air forces. That the Allies failed to acquire it is indicative of misplaced priorities by ground commanders who were in charge of their air piece. Local ground commanders with limited vision beyond their operating area held airpower in a defensive posture, fragmenting its effects and destroying any semblance of an orchestrated, coordinated air effort in support of a grander plan. To exacerbate matters, air superiority was difficult to obtain for other reasons too. One, the Americans did not have a frontline fighter that could match the capabilities of the German Bf 109. The P-40s were no match for the Bf 109 and, although P-38s were a better quality fighter, they were range ineffective, not yet having been fitted for extended fuel tanks. Besides, there simply were not enough P-38s. Two, Allies operated without offensive radar coverage over the area of operations until well after Kasserine Pass. Without advanced warning of an air threat, the Allies were left to fight in a purely reactionary mode with an inferior P-40 aircraft. To combat this, air commanders acquiesced to ground commanders and formed defensive “air umbrellas” in an attempt to protect ground forces who were often the target of the Luftwaffe. With Allied air aircraft preoccupied in air umbrellas and the rest beaten up by German fighters and ground fire during air support missions, airplane and pilot replacements could not keep pace for

much longer.[36] Furthermore, by early December 1942 the Allies closest airfield was approximately one hundred miles from the frontline troops, while the Axis enjoyed all-weather capable airstrips within fifteen minutes.[37] Three, lack of radio control attributed to the heavy loss of Twelfth Air Force aircraft. Not until late November did the Allies correct this problem.[38]

Lastly, other factors, such as weather, inexperienced commanders and troops, supply truck issues, and the lack of standardized air-ground coordination procedures, all contributed to the poor Allied air effort.[39] Weather hampered flight operations throughout the rainy season in late 1942 and even through February 1943. On 19 and 20 February, when American forces really needed the aid of air support, weather again halted all but a few sorties. Even then, the pilots could not assess their results. Aside from being deployed from bases far from the action, the only hard-surface runways were located at Port Lyautey, Tafaraoui, Maison Blanche, and Bône.[40] Consequently, when the rains came, flight activity often halted. On 14 February, while German planes harassed American forces near Sidi bou Zid attempting to relieve stranded units nearby, only one flight of four provided a brief respite. A sand storm had apparently hampered air support throughout the day.[41]

Inexperienced commanders and troops caused problems for both air and ground forces throughout the North African campaign. As previously noted, the U.S. was woefully unprepared to enter combat, having only stepped up preparations in the couple of years before Operation Torch. This inexperience manifested itself in a number of ways, one of which was inadequate air-ground procedures. For example, after the German attack into the Faid and Rebaou Passes in late January, Twelfth Air Force P-40s,

attempting to attack the Germans, mistakenly dropped bombs on American troops. In the same incident, U.S. antiaircraft gunners shot down one of the P-40s.[42] In another instance, American antiaircraft gunners, so jubilant after killing a German Stuka and so accustomed to the sight of only enemy planes, fired on two flights of American aircraft, damaging five and turning back the rest.[43] In yet another example, again American antiaircraft gunners, accustomed to seeing mainly enemy planes, opened fire and shot down five P-38s.[44]

Additionally, inexperience was evident in that Twelfth Air Force was not officially activated until late August 1942. Under Twelfth Air Force was organized XII Fighter Command, XII Bomber Command, XII Air Force Service Command, and later XII ASC. Given the effort to organize, much less train these units, it is no wonder air-ground coordination was lacking. This lack of air support was duly noted as early as training maneuvers in 1941. During the Louisiana maneuvers involving 400,000 troops and over 1,000 aircraft, air-ground support was identified as deficient.[45] Again, during training as late as May 1942 in Ireland, the same results were reported.[46]

The U.S. Army was hardly in a condition to defeat a German force, battle-tested and combat hardened since the late 1930s. When the U.S. Army finally started to mobilize and train, it concentrated on developing an adequate ground army. For a military still using the horse cavalry and struggling to assimilate tanks and motorized vehicles into a modern military force, much had yet to be proven concerning the command and control of aircraft. Even General Doolittle, chosen to activate and lead Twelfth Air Force, and much of the air corps leadership was focused on the air corps strategic bombing capability, not necessarily on developing air support assets or

standardizing effective air-ground procedures.[47] What was already a growing concern for air and ground operational commanders, the aftermath of the Kasserine Pass made these deficiencies all the more glaring. Change was late in coming, but it finally arrived.

In January 1943, in a high-level attempt to fix coordination problems, President Franklin D. Roosevelt and Prime Minister Winston Churchill met in Casablanca, Morocco, and agreed to create an improved Mediterranean Command (figure 4). For this study, the most significant change to note placed Lieutenant General Carl Spaatz, as head of the NAAF, answering directly to Tedder, Commander of Mediterranean Air Command, who was on equal footing with his ground counterpart. Directly under Spaatz's control was placed British Air Marshal Sir Coningham, commander of the Northwest African Tactical Air Force. This new structure placed an airman, Spaatz, in a central position to control Northwest African airpower. Additionally, the previous difficulty caused by II Corps commander outranking XII ASC commander was bypassed.[48] The land force-centric organizational structure and fragmented use of Allied airpower had culminated in February 1943. Although changes to FM 31-35 would not officially take place until after the war, nevertheless, new air-ground procedures emerged out of the lessons learned during the North African campaign. Additionally, new doctrine was created codifying the concept of centralized control by an airman. On 21 July 1943 FM 100-20, *Command and Employment of Airpower*, was released, effectively quelling any misinterpretations of FM 31-35. The new doctrine manual stated:

> Land power and air power are co-equal and independent forces; neither is an auxiliary of the other. The gaining of air superiority is the first requirement for the success of any major land operation. . . . Land forces operating without air superiority must take extensive security measures against hostile air attack and their mobility and ability to defeat the enemy land forces are greatly reduced.

> Therefore, air forces must be employed primarily against the enemy's air forces until air superiority is obtained. . . . Control of available air power must be centralized and command must be exercised through the air force commander if this inherent flexibility and ability to deliver a decisive blow are to be fully exploited. Therefore, the command of air and ground forces in a theater of operations will be vested in the superior commander charged with the actual conduct of operations in the theater, who will exercise command of air forces through the air force commander and command of ground forces through the ground force commander.[49]

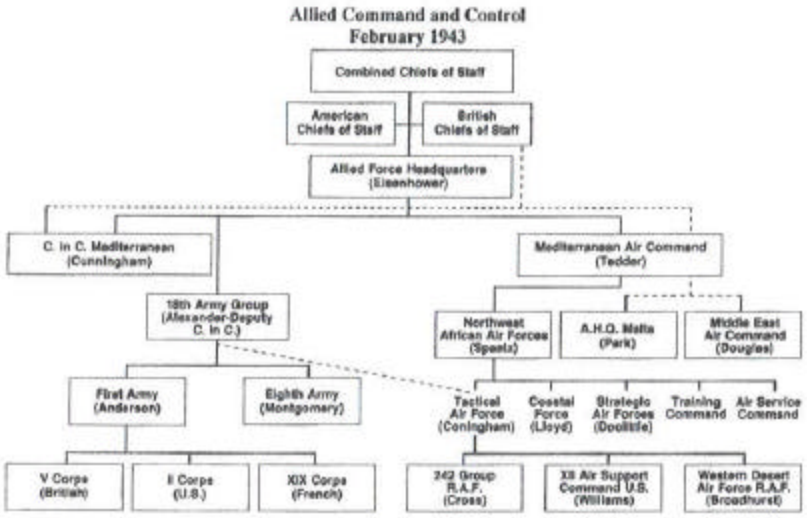

Figure 4. Allied Command and Control February 1943. *Source:* David Syrett, "The Tunisian Campaign, 1942-43," in *Case Studies in the Development of Close Air Support*, ed. Benjamin Franklin Cooling (Washington, DC: Office of Air Force History, 1990), 171.

Summary

It seems clear why the U.S. military initially performed poorly in North Africa, and it is even understandable why U.S. Army planners were remiss in their initial organizational structure of air and ground forces. They were blinded by vague doctrine, specifically in the form of FM 31-35. Further exacerbating the situation were

undermanned forces employing outdated and obsolete equipment. But, why did the U.S. Army go to war with FM 31-35? Well before Operation Torch, poor air-ground coordination had been identified. Regardless, it is not just a question of poor close air support doctrine, for this study the core issue is the lack of centralized control of air forces by an airman, embodied in FM 31-35 and the initial organizational structure in Operation Torch. Without centralized control airpower floundered. With centralized control, airmen consolidated efforts and together with the ground component defeated Axis forces in Tunisia.[50] But the question remains, did airpower advocates embrace centralized control by an airman before Operation Torch? If so, why was this basic tenet not incorporated into doctrine? To help determine the origin of this basic airpower concept, this thesis will turn to U.S. airpower's first major combat iteration.

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[1]Lieutenant General Dwight D. Eisenhower, letter to Major General Thomas T. Handy, 7 December 1942, Harry C. Butcher Papers, Eisenhower Presidential Library, Abilene, Kansas.

[2]Monro MacCloskey, *Torch and the Twelfth Air Force* (New York, NY: Richards Rosen Press, 1971), 144.

[3]Shawn R. Rife, "Kasserine Pass and the Proper Application of Airpower," *Joint Forces Quarterly* (autumn/winter 1998-99): 71.

[4]Stephen J. McNamara, *Airpower's Gordian Knot: Centralized Versus Organic Control* (Maxwell AFB, AL: Air University Press, 1994), 132-134.

[5]Air Force Doctrine Center, Air Force Doctrine Document 1, *Air Force Basic Doctrine* (Maxwell AFB, AL: Air Force Doctrine Center September 1997), 23.

[6]Martin Blumenson, "Kasserine Pass, 30 January-22 February 1943," in *America's First Battles: 1776-1965*, ed. Charles E. Heller and William A. Strofft (Lawrence, KS: University Press of Kansas, 1986), 227 (hereafter cited as Blumenson, "Pass").

[7]Ibid., 227-228.

[8]Ibid., 229.

[9]Ibid., 241.

[10]MacCloskey, 45-46.

[11]Ibid., 54-55.

[12]William B. Breuer, *Operation Torch* (New York, NY: St. Martin's Press, 1985), 130.

[13]Ibid., 120-122; and MacCloskey, 80-83, 90.

[14]MacCloskey, 92.

[15]Ibid., 105-106.

[16]Ibid., 117-121.

[17]William B. Breuer, *Operation Torch* (New York, NY: St. Martin's Press, 1985), 246-247.

[18]Ibid., 255.

[19]Blumenson, "Pass," 243.

[20]MacCloskey, 144-145.

[21]Ibid., 134-135.

[22]Ibid., 139-140.

[23]Ibid., 141-142.

[24]Ibid., 142-144.

[25]David Syrett, "The Tunisian Campaign, 1942-43," in *Case Studies in the Development of Close Air Support*, ed. Benjamin Franklin Cooling (Washington, DC: Office of Air Force History, 1990), 164 and McNamara, 15.

[26]Blumenson, "Pass," 245-246.

[27]Ibid., 246-247.

[28]Ibid., 250-254.

[29]Ibid., 257-260.

[30]Ibid., 261.

[31]MacCloskey, 143; and McNamara, 12.

[32]Syrett, 167.

[33]War Department, Field Manual 31-35, *Aviation in Support of Ground Forces* (Washington, DC: War Department, 9 April 1942), 11.

[34]Rife, 72.

[35]Ibid., 71

[36]Ibid., 73

[37]Eisenhower letter to Handy.

[38]MacCloskey, 141.

[39]Rife, 72.

[40]MacCloskey, 135.

[41]Blumenson, "Pass," 248.

[42]Ibid., 245-246.

[43]Martin Blumenson, *Kasserine Pass* (New York, NY: Berkley Publishing Group, 1966; reprint, New York, NY: Jove Publications, Inc., 1983), 266 (page citations are to the reprint edition).

[44]Ibid., 281-282.

[45]Blumenson, "Pass," 262.

[46]Ibid., 235.

[47]MacCloskey, 47-48.

[48]McNamara, 15-16.

[49]War Department, Field Manual 100-20, *Command and Employment of Air Power* (Washington, DC: War Department, 21 July 1943), 1-2.

[50]Syrett, 181.

CHAPTER 2

WORLD WAR ONE AND THE BATTLE OF ST. MIHIEL

The Ground Battle

As early as June of 1917, Henri Philippe Pétain, the French Commander in Chief, and General Pershing had tentatively agreed to an offensive, the first major American one, to eliminate the German salient at St. Mihiel. The salient, part of the Woëvre plain, consisted of approximately a 200-square-mile bulge in the French line with the town of St. Mihiel at the tip. Wooded high ground covered the western boundary of the salient. The southern boundary consisted of more forests and smaller hills. During the rainy season of September, the Woëvre plain had a tendency to turn swampy. The Germans occupied mainly the high terrain and had over time built quite an extensive defensive position. The French unsuccessfully attempted to dislodge the Germans in 1915, but since that time, both sides had dug in tightly. Some of the high ground afforded the Germans particular advantage in artillery fire. From their vantage point they could mass hidden artillery and fire upon the Allies either south or west. Additionally, the German defensive positions were four to five deep, including the various outposts, the Hindenburg Line, detached works, and the permanent fortifications at Metz and Thionville.[1] When the AEF arrived in theater, it had used this area to train its new divisions.[2] By removing the salient, the offensive could have the strategic effect of blocking German use of the rail center at Metz, the iron ore deposits in the Longwy-Briey area for which the Germans depended for munitions, and the coalfields of the Saar.[3] The salient was a good choice for an American operation in that it worked well with U.S. supply lines from the Bay of

Biscay and conflicted least with the British and French lines of communication further north from the front to the English Channel.[4] Pershing hoped to prepare the AEF to execute the St. Mihiel offensive by spring or summer of 1918. As it turned out, the offensive would wait until September 1918.

In July 1918, French General Ferdinand Foch, the Supreme Allied Commander, gave General Pershing his mission, the St. Mihiel salient. By August 1918, American forces in France had grown significantly. The result was the formation of the U.S. First Army. Immediately, Pershing moved the army headquarters to Neufchâteau to plan the offensive. This was Pershing' opportunity to disprove allegations that his officers could not accomplish high-level staff work. Additionally, as the commander of both the AEF and the First Army, it was his opportunity to command a field army in the first major American offensive of the war.[5] For the Americans, the planning was an arduous process, and they tackled it in intricate detail. Pershing wanted to leave no room for mistakes on this, their first independent action. Overall, the planning included over 500,000 U.S. troops, 110,000 French troops, almost 3,000 guns, and 250,000 tons of supplies and ammunition.[6]

While the U.S. was in the planning stages, British Commander Sir Douglas Haig convinced Foch to align the French and American forces and join the British in a combined effort to push the Germans back to Mézières, an effort that made the original objectives of the St. Mihiel offensive counterproductive. When Pershing learned this, he resisted on the grounds of maintaining his independent army. Pershing emphatically stated, “I can no longer agree to any plan which involves the dispersion of our units. . . . The danger of destroying by such dispersion the fine morale of the American soldier is

too great."[7] Foch, Pétain, and Pershing finally agreed to the following: the U.S. First Army would extend its front to the Argonne, the pursuit of limited objectives in the St. Mihiel offensive, and to plan a follow-on U.S.-led offensive in the Meuse-Argonne. Pershing had retained American First Army independence, but St. Mihiel was limited to simply closing the salient. The march to Metz would have to wait.[8]

Due to Foch's insistence on limited objectives, the new plan called for twelve and one-half divisions in the main attack and five and one-half divisions in reserve. Fourteen of these were American divisions and the French provided the balance. In opposition, the Germans had dug in eight divisions and one brigade. U.S. I Corps and IV Corps, with four and three divisions, respectively, took up positions on the southern portion of the salient. U.S. V Corps, containing the U.S. 26th Division, the French Fifteenth Colonial Division, and a brigade of the U.S. 4th Division, positioned itself on the northern most portion of the western half of the salient. The French II Colonial Corps, consisting of three divisions, were spread across the tip of the salient between the Americans. Together they comprised a total of 550,000 American and 110,000 French troops.[9]

The plan (figure 5) called for I Corps and IV Corps to attack first with six divisions, leaving the 82d Division in place to hold its position. On the opposite side of the salient, the single brigade of the 4th Division would do the same. The French divisions spread across the tip of the salient would attack an hour later, keeping pressure on the Germans until their retreat was cut off. Three hours after the initial thrust by I Corps and IV Corps, the 26th Division and French Fifteenth Colonial Division would conduct a secondary attack. An hour after their advance, French troops on their right flank would also attack across the salient. In final preparation, after careful

reconsideration, Pershing ordered artillery fire to prepare the battlefield, four hours on the southern edge and seven hours on the western edge.[10]

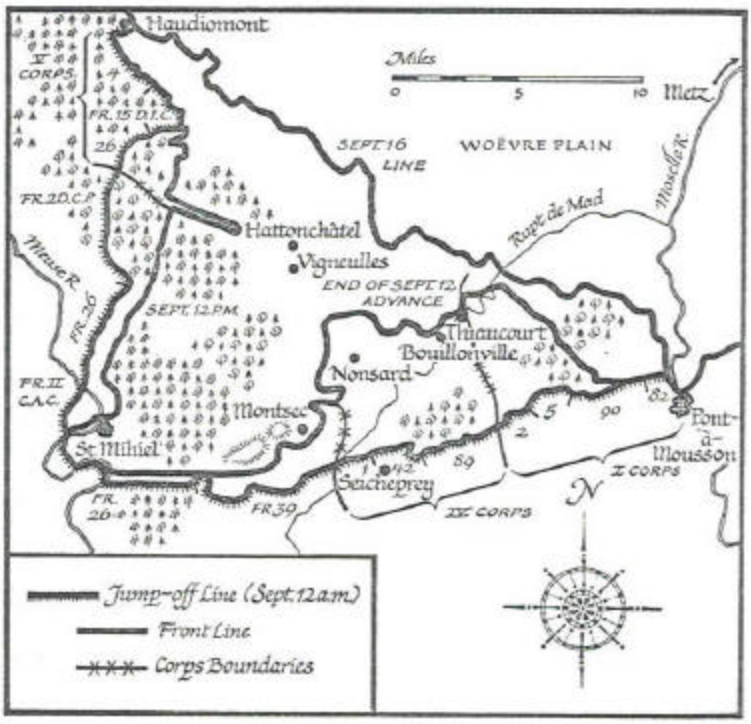

Figure 5. The St. Mihiel Offensive. *Source:* Edward M. Coffman, *The War to End All Wars: The American Military Experience in World War I* (New York, NY: Oxford University Press, 1968), 274.

And so it began in the early morning hours of 12 September with a barrage of 2,971 artillery pieces. At 0500, the I Corps and IV Corps attacked. Despite I Corps taking the brunt of German resistance, by that afternoon both corps had passed through the first day's objectives with relative ease and made the second day's objective of the high ground at Thiaucourt by evening. At the opening moments of the battle, the German artillery did not reply as intensely as expected, since the Germans, caught off guard, had

begun their withdrawal to rear defenses. To the Americans benefit, some of the German troops had returned to their primary fighting positions without their artillery support to accompany them.[11]

The secondary attack, not quite so easily accomplished, pressed hard and closed the lower half of the salient by 0600 the morning of 13 September. In the process, retreating German troops, caught on the roads between the two attacks, were trapped when the U.S. 51st Brigade upon reaching Vignuelles closed the roads. With such a resounding success, Pétain gave his permission for Pershing to press beyond the planned limited objectives, but not as far as originally planned. Hence, the Americans pressed hard and pushed the Germans to the base of the salient, the Michel line, within a few days.[12]

The American victory, while losing 7,000 troops, netted approximately 17,000 Germans, all but 2,300 taken prisoner. Additionally, the Americans captured some 450 guns and other war provisions. More importantly though, the Americans had their first major victory as a U.S.-planned and a U.S.-led operation, despite the doubts of their French counterparts. The victory also proved to be strategically significant in that the Germans were no longer in a position to threaten the Americans in the upcoming Meuse-Argonne offensive. Moreover, the Allies were in a position to advance to Metz and take the Briey-Longwy industrial complex and a local railroad, easing the logistics burden.[13] Moreover, a new weapon in the U.S. arsenal, the airplane, aided this first U.S.-led offensive of the Great War.

The Air Battle

Colonel William Mitchell, having been appointed Chief of Air Service, First Army, planned and led the air operations to support the offensive. Directly under his leadership, his plan included twelve pursuit, three-day bombardment, one night reconnaissance, and ten observation squadrons. The French contributed the Division Aerienne, which included forty-two pursuit and twelve observation squadrons. Additionally, the British and the Italians, while not under Mitchell's command, contributed eleven more night bombardment squadrons to the effort. All in all from fourteen different airfields, 1,481 pursuit, observation, day and night bomber aircraft were planned for the offensive.[14] Of these, Mitchell commanded 1,346.[15] In his memoirs Pershing said of the assembled force, “The aviation force, consisting of nearly 1,400 planes, under Colonel Mitchell, was the strongest that had been assembled up to that time. It included the British Independent Bombing Squadrons, under General Trenchard, which Marshall Haig had generously sent and which were particularly useful for attacking important rail centers in rear of the enemy's line.”[16]

Mitchell outlined for the assembled force, three main tasks. First, the air service had to provide reconnaissance and artillery spotting. Second, it needed to provide air superiority, and third, the air service needed to interdict supply and movement to the rear of the enemy forces. Unlike any air operation until that time, Mitchell planned his attacks from both sides of the salient, as opposed to the standard straight-line tactic of the day. To overwhelm the Germans, Mitchell planned for the French to attack by brigades of about 400 aircraft. One brigade from the right side, another from the left at alternating times upon the same targets. To meet his first task, Mitchell apportioned his American

observation squadrons, about five hundred total aircraft, to each division, each corps, and the army. To meet his second task, he planned for the pursuit aircraft to patrol the enemy's rear, disperse air formations, deny enemy reconnaissance, and protect the Allied bombers. Lastly, the bombers were assigned such targets as airfields, trains, convoys, bridges, trains stations and crossings, cantonments, ammo dumps, communications, and troop movements along the road.[17] Opposing the Allied air effort, the Germans had an estimated 213 aircraft of which more than one-half were reconnaissance. The rest were pursuit and bomber aircraft.[18] As expressed by Pershing, the offensive began with Allied air superiority, and the Allies maintained it throughout the operation.[19]

When the offensive kicked off in the early morning hours of 12 September, poor weather had set in at Allied airfields and across the salient. Poor visibility prevented the mass formations that Mitchell had planned, but the fledgling air service was bound to make a go of it. The I Corps Observation Group was successful in most of its support missions even though hampered by heavy mist and low ceilings. They were able to launch fifty sorties without losing a single aircraft. First Army Observation Group, led by the experienced 91st Aero Squadron, successfully launched its first two sorties. Only one found a hole in the clouds from which to fly deeper into the salient. Throughout the day, other 91st aircraft were able to penetrate up to fifty miles across enemy lines, but only able to conduct visual observation, not aerial photography. Luckily for the Allies, the Germans were hampered by the same weather. The 22nd Aero Squadron was able to mount low-level strafing and reconnaissance runs on retreating German troops.[20]

The First Day Bombardment Group launched a single aircraft at about 1000 hours. Although the bomber reached its objective and dropped its bombs, upon returning

to base, German Fokkers brought it down. At 0130, eight more bombers were launched and successfully attacked their targets, but the group's third mission of the day ended in the loss of four out of five launched sorties. Late in the day and unequipped for night flying, they crashed upon return to base. And so it went, all day long, aviators daringly attempted to execute their assigned mission, despite the horrendous weather, some units not able to get airborne until the afternoon hours.[21]

Day two of the offensive was much the same kind of weather. Again low ceilings and poor visibility hampered flying. Small formations did get airborne to conduct aerial combat and strafing runs, but by this time the salient was already pinched closed. Additionally, American ground troops were pushing the Germans to the base of the salient. Over the course of the next few days, the air force engaged in considerable action. At night, the weather was more cooperative and British, French, and Italian squadrons were able to attack targets along rail lines and enemy concentration points. By Saturday, day three, the sun had broken through the clouds, and normal flying activity resumed. Dogfights filled the skies, as large formations of enemy planes were met with fierce American airpower. Aerial supremacy was firmly in the Allies grasp.[22]

When the battle had ended, despite being hampered by poor weather and their inability to mass formations, the American Air Service had managed to launch over 3,300 sorties, the majority of its planned missions. In total it flew 4,000 hours, fired 30,000 rounds of ammunition, and dropped 75 tons of ordnance on over 1,000 bomb runs. The Germans lost twelve balloons and more than sixty aircraft.[23] The Americans lost a total of "75 pilots and observers, killed, wounded, captured or injured in crashes."[24]

America's first great air battle had successfully ended. It was a triumph of independence for both the American First Army and the American Air Service. Pershing showed his gratitude and personally congratulated Mitchell on a job well done. Although, a considerable amount is written of prewar aviation, this author finds it a bit perplexing that missing from Pershing's memoirs are accounts of the air battle and specific references to American Air Service contributions during the war. Perhaps this is a testament to Colonel Mitchell's command of the situation, as this may be an indication of Pershing's willingness to grant Mitchell independence in planning the St. Mihiel air campaign and of Pershing's trust in his abilities to do so effectively.

Before the end of the war, the American Air Service would play a significant role in the Meuse-Argonne offensive. By the end of the First Great War, all the ingredients for a great air force would be present, except that airpower still had some major growing pains to endure, mainly in the way of technological advancement and certainly in doctrinal development. Regardless, the First World War saw the advent of the aircraft as a new weapon of war and in a relatively short time, almost all that it would later aspire to was introduced during this time frame. From its early role as an observation platform, it developed a pursuit role, a tactical support role, and a limited strategic bomber role. Even the concept of centralized control by an airman was alive and well with Mitchell's command of the American Air Service. Was it coincidence that U.S. airpower's first time at war resulted in an independent air arm commanded by an airman? Before an examination of Mitchell's role in the formation of the Air Service and to get a better perspective of the times, the state of military affairs before U.S. entrance into the war is examined.

Prelude to War

From the end of the American Civil War until the early twentieth century, the U.S. military was involved in the Indian Wars, imperial conquests abroad, and constabulary affairs. These involvements took the military farther west within its own continent and the Philippines, south to Mexico and Cuba, and east to Russia. Each of these smaller, limited conflicts usually involved small unit tactics, and because they were short of all-out war, commanders had to adjust their tactics, techniques, and procedures within each scenario, sometimes with positive results, other times not. Continuing a precedent set early in its history, the U.S. military sorely lacked men and equipment on the eve of major wars. On the eve of the First World War, the situation was no different; the U.S. found itself woefully short of preparedness.

To defend the territories acquired during the late nineteenth-century, imperial conquests, the U.S. needed additional military manpower. To accomplish the task of raising more troops, the U.S. Congress legislated the size of the army to 100,000 officers and men in 1901. Funding this increase in manpower strength was accomplished incrementally, so that by 1915 the military had reached approximately 106,000 officers and men. With conflict raging in Europe, military planners estimated that the U.S. would need ten times that amount if it ever had to fight a major war. So, Congress enacted the National Defense Act of 1916, increasing the size of the military to 175,000. Again, Congress intended to reach that number incrementally over five years. Unfortunately, it was too little, too late. When the U.S. entered World War I, officers and men totaled a little less than 122,000. The National Guard, also a product of the National Defense Act of 1916, numbered far less than one-half of its authorized strength of 450,000.[25]

In addition to growing in pure numbers, the tactical structure of the army, according to Allan R. Millet, was beginning to transform from a constabulary, coastal-defense force to one capable of meeting a modern enemy in major land warfare. In this vein, the General Staff sought to increase mainly infantry and field artillery strength. The infantry grew from thirty to sixty-five regiments, and coastal artillery increased from 215 to 263 companies. Despite the emphasis on infantry and artillery, the Cavalry also increased from fifteen to twenty-five regiments. This change in structure demonstrated an evolving U.S. military doctrine.[26]

Prior to entry into the First World War, U.S. Army doctrine emphasized offensive operations, in the tradition of maneuver warfare. The National Defense Act of 1916, in addition to increasing troop strength, emphasized the growing idea among some within the Army that more field artillery was necessary. This tendency was drawn from lessons learned from the Russo-Japanese War and the Balkan Wars earlier in the century. This paved the way for greater emphasis on field artillery, not so much as a means to prepare for an infantry advance, but perhaps as the decisive effort itself. This created a bit of controversy between the Artillery and Infantry Branches, the latter emphasizing mobility and infantry firepower, the former more and heavier artillery pieces. The mobile Army concept eventually established itself, so that by 1917, the Army had built itself into a light, mobile force. Thus, the Army's weaponry, from its .30 caliber Springfield magazine rifle to its machine gun, was light in nature, accentuating its commitment to maneuver warfare. So, how did airpower fit into the Army's concept of maneuver warfare?[27]

On 17 December 1903 the Wright Brothers made their first powered flight. It took less than eight years later for their invention to be used in a wartime role by the Italians

during their invasion of Turkish Libya. The Italians mainly used their aircraft to search for Turkish forces on the ground and then, lobbed grenades at them. Unreliability and durability were an issue for these early aircraft, but they nonetheless had proven their worth in this limited role. Again during the Balkan Wars of 1912 and 1913, aircraft were used as reconnaissance platforms. Due to their speed and range, they proved much more useful than their lighter-than-air counterparts.[28]

The U.S. Army bought its first aircraft, a Wright Flyer, in 1909. The Wright brothers then trained six new pilots for the Army. In 1910, an Army lieutenant, using a Springfield rifle, demonstrated the ability to hit a target from a circling airplane. A year later, another lieutenant demonstrated the ability to destroy targets by dropping bombs from the air. Yet, the Army was unimpressed with the aircraft's potential.[29] Not until the 1916-1917 Punitive Expedition to Mexico, led by General J. Pershing, did the Army use an airplane in an operational role for the first time.[30] However, the full potential of this new weapon of war had not been fully realized. Few saw beyond its ability to provide aerial observation and scouting.[31]

The First World War brought a glimpse of what was to be the rise of airpower to a prominent role in warfare. From its early role as a purely observation and scouting platform, it grew in stature. The pursuit plane, the precursor to today's fighter, evolved from an armed reconnaissance aircraft and was used for the purpose of fending off opposing aircraft. In 1915 the Germans took it a step farther with the addition of the synchronized machine gun, capable of firing through the aircraft propeller while in flight. By 1916, the importance of aerial supremacy made apparent the ever-increasing role of airpower in modern warfare with the hundreds of “dogfights” along the Western Front,

the hallmark of World War I aviation. Later, the Germans used the aircraft to replace the zeppelins in the role of strategic bombardment, when Gotha and Giant bombers dropped seventy-three tons of bombs on the British Isles, including London, from June 1917 to November 1918, causing over 2,900 casualties. As a result of this bombing campaign, in April 1918 the British combined their Royal Flying Corps and Royal Naval Air Service (RNAS) into the RAF. The RAF was divided into distinct commands and missions, one being the defense of the homeland. This was a significant step for aviation in that it was the first emergence of an independent air force, distinct from the Army and Navy. By the end of World War I, over 30,000 aircraft had been designed for combat, a huge leap for a fledgling weapons system.[32] By the time the U.S. entered the war in April 1917, Army aviation had much to learn from their European counterparts about the employment of airpower. It would have to learn quickly to be effective. The Europeans had made greater strides in the application of airpower during the war. Given the infancy of airpower in general and the state of U.S. Army aviation, it is no small wonder how in less than two years U.S. airpower had real substance.

On 6 April 1917, the U.S. was fully drawn into the conflict by declaring war on Germany. The Imperial German Army had proven itself capable of fighting a three-front war and, unlike its adversaries, adapting its doctrine along the way. Its ranks had swollen to over six million men of 241 divisions strong. They had beaten the Russians and Italians, while for the three years prior to U.S. entry, kept the rest of the Allies at bay. The cult of the offensive, which characterized the armies of 1914, had stagnated into a quagmire of attritional, trench warfare. The western front was a virtual stalemate. This

was the state of affairs on the eve of U.S. commitment to join the Allied effort in 1917. This was the situation, Billy Mitchell believed, that airpower could alleviate.[33]

The Allies, Britain and France in particular, had been taking a beating. Their offensives of 1917 had whittled their forces, as well as their morale, way down. If anything, they needed at least a symbolic show of support from the fresh American troops. The U.S. War Department formed the 1st Expeditionary Division (later redesignated the 1st Division). By mid-July the major components of the division had sailed for Europe or were already in place. Moreover, the Army sent its most able general, John J. Pershing, to command the AEF. He had distinguished himself as the best man for the job. His operational experiences included Cuba, the Philippines, and most recently, Mexico. A former member of the General Staff, he was well connected with Washington politics. Additionally, he had observed the Russo-Japanese War firsthand. He understood the European military model and even spoke a little French. What better choice was there to lead the AEF?[34]

By the summer of 1917, Pershing's staff had drafted a plan to form an army in France and conduct offensive operations against Germany. To accomplish their goal, they needed an estimated four million men, just as earlier planners had predicted. Heavily backed by Secretary of War, Newton D. Baker, General Pershing's main objective was to build an independent American force capable of major decisive operations on its own by 1919.[35] Manning problems, shortage of equipment and supplies, and Allied pressure made this a difficult task. Starved for manpower, British and French leadership wanted to throw the Americans in with already formed Allied units. Pershing and his staff were reluctant to do this for good reason. They did not want American lives spent as the

British and French had done for the previous three years, nor did he wish to water down the American presence in Europe. He wanted a distinctly American force capable of executing its own operations against the enemy. Still, pressure persisted from the Allies. To gain support for his position, he would have to ensure a good performance in the 1st Division's initial battles.[36]

U.S. Army Aviation Prior to World War I

As already remarked, the early twentieth century brought congressional involvement in the growth of the U.S. Army in terms of manpower, but in terms of airpower, Congress was slow to respond. I. B. Holley, in his special study of the U.S. Air Force, points out that then Secretary of War, William Howard Taft, upon presenting his 1904 annual report to the president, failed to mention anything about airpower, even though he had singled out the Signal Corps for its “foresight and energy” in executing its annual projects. Remember, at this time, the U.S. Army Signal Corps oversaw matters concerning aviation. By the time of the 1904 report, the Wright brothers had already made over a hundred flights, and although the Army did not buy a Wright plane until 1909, certainly the prospect loomed large and seemed appropriate to comment upon when reporting of the Signal Corps' foresight. This event seemed to foreshadow later congressional reluctance to appropriate funds quickly and substantially. This reluctance finally gave way to a substantial appropriation in July 1917, well after the U.S. had entered the war.[37] This sudden onslaught of congressional funding and attention would repeat itself prior to U.S. entry into World War II.

It is interesting to note that the Wright brothers were first approached by the British government in early 1905, but preferred to offer their services to their own government first. This may give some evidence of Britain's advanced thinking toward aviation, which demonstrated itself early in both world wars. After predictable bureaucratic meandering, it was not until the president and Secretary of War got involved that things took off, so that by 1908, some money had been appropriated, flight trials had been performed under contract, and an Aviation Division, under the Office of the Chief Signal Officer, had been formed. Also by this time, the Signal Corps had one officer and thirteen enlisted men for its one airplane and three balloons. Within five years, the number had grown to twenty-two airplanes and fourteen pilots. By 1914, the Signal Corps, to its credit, had established a program to conduct research and development of the airplane as a weapon of war. This included aerial firing of machine guns and bomb dropping. All this was done with a meager $250,000 from Congress. Despite the lack of funds, it seemed some in the Army were thinking way ahead in terms of the potential use of airpower on the battlefield.[38]

Unfortunately, the converse was true. Holley points out several occasions when the chief signal officer failed to see the potentiality of the airplane as anything more than an observation platform. The chief signal officer's viewpoint was documented in his annual report to the War Department and based on appropriated funds, this attitude seemed to prevail among those in Congress too. With such meager funds, Holley concludes that it is no wonder the observation role prevailed early on. Research and development in observation aircraft would have been much cheaper than experiments in pursuit or bomber roles.[39] Not until eighteen months after the outbreak of war in Europe

did the chief signal officer make vague acknowledgment of the need to develop three types of airplanes: reconnaissance, combat, and pursuit. Still, he persisted in emphasizing observation as the key role.[40]

The growing prominence of air war in Europe seemed to have an effect on Congress. In 1916, Congress appropriated $500,000 over its annual $300,000 with the passage of the National Defense Act. This act increased personnel and called for special flight pay to draw more aviators. About this time, the growing Aviation Branch was clamoring for wartime information concerning the employment of airplanes. The Secretary of War, Newton D. Baker, noted to Congress that the warring factions in Europe were carefully censoring operational and technical information about aircraft. Additionally, requests for observation officers to go abroad were repeatedly turned down. Hence, there was a vacuum of relevant wartime information concerning this new weapon. When the U.S. entered the war in April 1917, the Signal Corps had 65 officers and 1,120 enlisted, operating 200, mostly trainer, aircraft from two airfields. All of this is important to note, for without proper equipment, relevant, real-time information from Europe, substantial funds, and pilots, how could the U.S. Army be expected to build an air force, much less to develop doctrine with which to employ it?[41]

Birth of the American Air Service

In March 1917, Major William Mitchell was sent to Europe to observe the war first-hand, in particular the effects of aviation on the western front. Mitchell, having been in the Signal Corps and now a member of the Army General Staff, became one of only five U.S. aviation officers overseas, when the U.S. entered World War I.[42] Having

learned to fly while on the General Staff, Mitchell knew the Wright brothers and kept abreast of the latest in aviation matters. He recognized early on that airpower could be the key to victory, as it was about the only effective operation by that time in the war. He had made this observation despite the seemingly limited supply of foreign information available to the U.S. military. Moreover, he recognized that before too long the U.S. would need to come to the assistance of the Allies, if they were to be victorious. With his ability to speak fluent French, Mitchell was in a great position to make significant contributions.[43]

Mitchell arrived in France in April 1917 and within ten days, he had arranged an office for handling aviation affairs, prepared an initial organizational plan, a list of necessary equipment, and subsequently sent his plan to Washington, DC. Continuing an early trend set by Congress, Mitchell failed to appropriate funds for his venture from Washington. Mitchell makes it clear in his memoirs that he was frustrated with what he termed, “a series of blunders” by those directing aviation in the U.S. Despite the lack of financial support, he persisted in organizing what would become America's first combat air force. From 20 to 30 April 1917 Mitchell participated with the French Fourth Army's spring offensive. During this time, no doubt, he was greatly influenced by the horrors of what he witnessed, but perhaps more importantly, he was influenced by whom he met.[44]

During those ten days, it is fair to assume that a good deal of what influenced Mitchell's thoughts on airpower was either supported or conceived. He met with several influential French and British aviators who shared their experiences and thoughts on their new weapon of war. He learned what strategy and tactics the French, British, and German aviators used against each other. So rapid was his learning curve that by the end of the

first day, he had already formed his opinions of the French Air Service as an efficient organization. He noted the quality of their planes, mechanics, and aviators. Mitchell met Captain Victor Ménard, commander of all-French army pursuit squadrons. On the occasion of their first meeting, Ménard spent over an hour with Mitchell, no doubt advising him of aviation matters on the Western Front. Mitchell made note of the size of each pursuit squadron and the particular way the French handled matters of maintenance. He also met Major Paul-Fernaud du Peuty, commanding officer of the entire French air organization in the field. Du Peuty had expressed his dissatisfaction with interference of nonaviators in his organization. He was so unhappy with the meddling that he requested to be relieved of command.[45] Whatever circumstances he relayed to Mitchell made an indelible impression for already Mitchell made his thoughts clear early in his memoirs. "I felt that until air forces were removed from the control of ground personnel, this condition would continue to exist. There should be a distinct line of demarcation between the air force and the army, as between the army and the navy."[46] Mitchell had only learned to fly a short time before arriving in France, had never commanded an aviation squadron in peacetime or wartime, yet he already had in his mind that centralized control by an airman was essential to airpower's success.

Mitchell also noted during this time that aviation offered the last source for successful offensives against the enemy. He observed the current French aviation strategy. He pointed out that due to the condition and lack of sufficient pilots, no doubt a factor of a war of attrition, the French were in a defensive posture. They had to be in order to survive. In Mitchell's estimation, the French were just barely holding on and could in no way expect to win with such a strategy. He thought they needed a fresh

perspective and mostly a fresh crop of young, fit aviators, the source of which was the U.S. To gain “mastery of the air” he needed 8,000 to 10,000 airplanes and they “had to act on the offensive.”[47] From Mitchell's memoirs, it is clear he already believed in airpower's offensive nature prior to his arrival in theater, but no doubt his experience with the French during these ten days solidified his earlier premise.

In May 1917, Mitchell met another very influential aviator General Hugh Trenchard. At that time, Trenchard was the commander of the Royal Air Force of the British Army. Mitchell made it clear that he had a great respect for Trenchard and that he and Mitchell quickly became friends. During their first meeting, Trenchard read Mitchell his current aviation policy. Its essence can be summed up in the following passage. “The aeroplane is not a defense against the aeroplane but it is the opinion of those competent to judge, that the aeroplane as a weapon of attack cannot be too highly estimated.”[48] In addition to Trenchard's views of the offensive nature of airpower, Trenchard also made his views of centralized control clear to Mitchell. Mitchell concurred with Trenchard's opinion that the only way to handle airpower was to unify it all under one command, a belief Trenchard held probably due to his differences with the RNAS at the time. Mitchell was the only properly credentialed, American officer on the Western Front gleaning such lessons learned before the rest of the U.S. Army arrived in theater. The bottom line is that in a matter of weeks, Mitchell was exposed to the French and British way of doing things in the air and on the ground. From them, it seems, he learned or solidified his views that centralized control is paramount to utilizing the aircraft for what it was designed for, taking the offensive.[49]

Several iterations of the command structure and composition of the American Air Service took shape over the course of that first year. When Pershing and his staff arrived on 13 June 1917, he brought with him Major Townsend F. Dodd as his aviation officer. Dodd had been with Pershing in Mexico, but because Mitchell was a lieutenant colonel by then, Mitchell became the ranking aviation officer in theater. Upon Mitchell's first meeting with Pershing, both he and Dodd suggested detaching aviation from the Signal Corps and making it an independent fighting force, “as in all other services,” Mitchell noted.[50] Mitchell also suggested convening a board of aviators to study his recommendations for the future aviation organization. Pershing agreed to both suggestions, and Mitchell notes in his memoirs that this was the first time aviation was regarded as an independent combatant arm. Therefore, because of Mitchell, when the U.S. entered the war, airpower got off to an independent start. Soon afterward, in an attempt to centralize the control of aviation matters, Pershing sent out a cable strongly urging all aviation matters be handled through his headquarters. Mitchell notes later in his memoirs that Pershing was cautious about fully supporting him in all-aviation matters. Mitchell states that perhaps knowing the significant amount of money and attention Congress was finally committing to aviation, he sensed a political issue that needed to iron itself out. A long road lay ahead for the American Air Service and Mitchell to gain full independence.[51]

When Mitchell presented Pershing with his ideas concerning the air organization, he divided it into two categories. His first category of aviation attached squadrons providing ground support to division through army level. The second category called for

an independent, strategic, aviation arm. The following is an excerpt from a memo from Mitchell to Pershing's Chief of Staff describing this second category:

> Based on the theory that no decision can be reached on the ground before a decision has been gained in the air, the French General Staff has requested that in addition to the aviation units which form a part of the American troops coming to France, there be organized a number of large aeronautical groups for strategical operations against enemy aircraft and enemy materiel, at a distance from the actual line. These units would be bombardment and pursuit formations and would have an independent mission very much as independent cavalry used to have, as distinguished from divisional cavalry. They would be used to carry war well into the enemy's country.[52]

The memo makes two things clear. One, it makes clear the degree of French influence upon Mitchell's thoughts concerning aviation. At the very least, French air doctrine was consistent with Mitchell's own ideas. Second, the memo makes it clear that Mitchell believed the mission for which airpower was most suited, the offensive or strategic mission, needed to be an independent one. Incidentally, the idea of independent, strategic bombardment very much mirrored Trenchard's theories too, but more on Trenchard in the next chapter.

Pershing convened a board to determine the form and composition of the American Air Service. The board consisted of four Signal Corps representatives, one cavalry officer, and one field artillery officer. Obviously, the Signal Corps had been the owner of army aviation from its inception, but if Pershing wished to capitalize on independent ideas, it did not help to stack the deck in the Signal Corps' direction. Nonetheless, Mitchell's influence helped the board formulate a recommendation to Pershing consistent with that already suggested by the French. The French had suggested a balanced approach of thirty bomber and thirty fighter groups and another force for troop support determined by the size of the ground force, but this recommendation was never to

be forwarded to Washington for Pershing had already approved his own staff's recommendation. Pershing forwarded his staff's proposal, entitled General Organization Project, to Washington for approval. The plan outlined the structure of the entire AEF. In terms of aviation, it called for fifty-nine tactical squadrons entirely for troop support. In his memoirs Pershing noted that the U.S. government had done very little in preparation for war. Hence, Pershing felt compelled to be especially proactive and plan accordingly.[53] Whether he meant to overlook strategic airpower and Mitchell's earlier suggestions is unknown. Initially, independence and strategic airpower seemed lost, but Mitchell persisted. Through October 1917, he made further proposals and finally received satisfaction, when his proposals became the official AEF aviation program. After several iterations, the final version called for 261 squadrons of which 120 were pursuit, 40 observation, and 101 bombardment. The total number of bomber squadron had grown immensely from what was first accepted by Pershing. Holley noted correctly that it appears Pershing and his staff had wholeheartedly accepted the strategic air doctrines of the French. This author would add “of Mitchell too” for if not for Mitchell's persistence, who knows what the final outcome might have been?[54]

In August 1917, Mitchell further separated combatant control from administrative control of the air service, by appointing Major R. C. Bolling as Chief of the Interior Air Service of the AEF. This move left Mitchell as the Commander of the Air Service of the AEF. By September, although Pershing had attempted to centralize control of all aviation issues, it became clear that he needed someone on his staff to deal with the Allies and communicate with the U.S. Therefore, he appointed General W. L. Kenley, Chief of the Air Service. This actually took some pressure off of Mitchell and freed him to deal with

combat issues in his new title as, Commander of the Air Service in the Zone of Advance.[55]

Characteristic of the unstable nature of the organization, in yet another change of personnel, in November Brigadier General Benjamin Foulois arrived with orders from the president to put him in charge of aviation. According to Mitchell, Pershing was left with no choice but to replace Kenly with Foulois. Foulois states in his memoirs that Pershing had personally requested him to take charge. It must be remembered that Foulois and his 1st Aero Squadron had been assigned to Pershing during the Punitive Expedition into Mexico in 1916, so Pershing and Foulois had worked together before France.[56] This dispute in facts is somewhat indicative of the differences of opinion experienced between Mitchell and Foulois for the remainder of the war. Little by little to Mitchell's chagrin, the experienced aviation staff officers were replaced with those less experienced, until only Foulois remained as the lone aviator on the staff. Those relieved of duty included Bolling who had, among other things, worked hard to procure French aviation supply assistance.[57] Pershing, seemingly tired of the infighting, named Brigadier General Mason M. Patrick, a ground officer, to the new chief. Foulois, at first Chief of the Air Service, First Army, asked to be Patrick's assistant. Pershing agreed to the change. Still, Mitchell remained in charge of matters pertaining to combat and in January 1918, despite their rivalry, Foulois recommended that Mitchell be named Commander of the Air Service of the First Army Corps.[58]

Much of the time from Pershing's arrival until April 1918, Mitchell and his staff were in the process of building the American Air Service from the ground up. In April 1918 under the direction of Mitchell, but still under the command of the French, the

American Air Service saw its first action. By May, the American Air Service consisted of an observation group composed of two squadrons and a pursuit group composed of four squadrons. Waiting in the wings was a nearly formed army observation squadron and bombardment squadron. Within a year of arrival, both the U.S. Army and the American Aviation Service were nearly ready for independence from French control.[59] Finally, on 25 July 1918, Foulois wrote to Pershing recommending Mitchell as Chief of Air Service, 1st Army. Pershing agreed. The Air Service, with Mitchell in charge, and U.S. First Army were on their own. St. Mihiel lay ahead.[60]

Summary

The Battle of St. Mihiel was important for two main reasons. One, it was the AEF's first major offensive as an independent fighting force. The U.S. Army proved to itself and the Allies that it could plan, execute, and win a major offensive. Second, and most importantly for this thesis, it was important because it was the first major air battle conducted by an autonomous air force in cooperation with a ground army. That point is significant. Was it purely luck that the U.S. military's first major air battle was carried out by an autonomous force centrally controlled by an airman? After carefully examining the events and circumstances surrounding the formulation of the American Air Service, it is this author's opinion, that it was indeed carefully conceived and planned based upon what little airpower experience the Allies had and the thoughts, beliefs, and influences of Colonel William Mitchell. Although Mitchell came with many preconceptions, the French and British aviators he met on the Western Front during the last ten days of April 1917 played a significant role in influencing him.

It is important to note what the state of military affairs was prior to U.S. entry into the First World War. As already discussed, the U.S. was woefully unprepared in terms of manpower and equipment, not to mention planning. From the American perspective, airpower's development had everything working to its disadvantage for several reasons. First, the U.S. was severely lagging behind the European war powers in terms of pilots, equipment, and doctrinal development. That the European war powers were secretive about their aviation developments did not help matters. Second, Congress was slow to act and appropriate funds for research and development until after the U.S. entered the war. This was too little too late. Third, since aviation was a new, unproven endeavor, army leadership was reluctant to invest much forethought and vision into its development. This is evidenced by aviation's attachment to the Signal Corps. This attitude was further exacerbated by the Chief of the Signal Corps' comments to Congress concerning aviation's limited worth. Historian Holley makes an interesting observation. What would have been the doctrinal outcome if the Cavalry had been the “foster parent” of aviation, instead of the Signal Corps? Perhaps independence and offensive doctrine would have developed much sooner. This could make an interesting study, but the outcome of which, can only be speculated.

Clearly, had it not been for the work of Mitchell, the U.S. Air Service in World War One would have never risen to the force it was by the end of the war. By then it had grown to an air force of more than 150,000 men and 15,000 aircraft. This was quite an accomplishment from very humble beginnings. Mitchell himself believed that had the war continued until 1919, airpower would have been the decisive factor. Whether, during the St. Mihiel offensive, the Air Service was combat effective or not is not the important

facet to note. Other than the factor weather played in the battle, aircraft range and bomb-load capacity were limiting factors as well. Yet, in addition to the fact that all the elements of airpower's roles and functions were present during World War I, it is most important to note for this study that Mitchell, upon his first iteration of American airpower, put together a largely autonomous force, centrally controlled by an airman. Without this basic organizational structure, airpower could never reach its full potential. That Mitchell and Trenchard recognized the importance of this endeavor at such an early stage of development is impressive and fortunate. Usually, such doctrinal beliefs come at a great price in humanity. The basic tenet's origin seems clearer now, but what happened to centralized control by an airman between Mitchell's experiences and Kasserine Pass? In the next chapter, what the classical airpower theorists advocated concerning airpower's basic tenet will be analyzed in an attempt to determine what became of it during the interwar years.

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CHAPTER 3

THE INTERWAR YEARS: THEORY, THEORISTS, AND THE AIR CORPS TACTICAL SCHOOL

Building a Basic Theory of Airpower

When the First World War ended in November 1918, airpower had barely scratched the surface of what it was destined to become by the end of the century. Following the war, etched deep in the minds of men, like Trenchard and Mitchell, was the promise that airpower offered in denying mankind another protracted, trench-style slaughter. Unfortunately for airpower's sake, the war did not provide the practical and proven experience that would make their claims more than just theory. Aircraft capabilities, the slow rise of air forces to prominence, and lagging doctrinal development, among other things, precluded that from happening. Thus, the interwar years proved to be a larger struggle for airpower's rise in status, than otherwise might have been. World War I had whet the appetite of airpower enthusiasts, but did little to win accolades and approval from traditional military thinkers. Airpower advocates firmly believed in the promise of airpower's decisive ability, but traditional military thinkers still relegated airpower to that of a support role. This debate, shaped and influenced in a myriad of ways, dominated airpower's development during the interwar years.

To many within and outside military circles, airpower had yet to prove itself as a decisive force. Following World War I, advocates set out to finish the task. Hence, the next twenty years were marked by their attempt to attack the problem on all fronts. Airpower enthusiasts took their case to the American public, first inciting and then, taking advantage of America's growing fascination with flying. Others took their case to

Capital Hill, pleading with Congress for appropriations and legislation. Still, others attempted to plead their case within military circles, fighting conventional wisdom and military tradition. All of these people had one thing in common, their absolute belief that airpower was synonymous with national power. Like the great naval powers of their time, airpower would be a nation's new symbol of strength.

During this interwar period, the classical airpower theorists came to be. Names like Douhet, Trenchard, and Mitchell dominated the scene early and set the pace for others to follow. They set out to define airpower's unique capabilities and to envisage what the future might bring. What makes these three men so important is not so much that they were the first to espouse their ideas, but that they laid the foundation of basic airpower theory. They held nothing back in boldly proclaiming their ideas. In some cases, it cost them their careers, an indication of their dedication to the cause.

Important for this study, is the fact that whether stated in exact terms or not, these theorists generally advocated centralized control by an airman. The following is a list of themes repeated in one form or another from World War I through the interwar years:

1. Offensive Nature of Airpower
2. Command of the Air
3. Autonomous Mission
4. Independent Air Force

To some degree, whether full or in part, interwar airpower advocates espoused these ideas at one time or another. They proclaimed that airpower is uniquely offensive in nature, that to hold it in reserve for defensive purposes is wasteful and futile at best. Airpower, they urged, is best applied by destroying the enemy's war-wielding capacity

before it can be brought to bear upon a friendly nation. They generally differed on the point of what exactly determines an enemy's war-wielding capacity, but nonetheless, when airpower is applied offensively, they agreed command of the air is the natural by-product, for without it, nothing else matters, because not much else can be achieved. Given that airpower is uniquely offensive and command of the air essential, it follows, they urged, that airpower has a unique mission. It is unique in the sense that it can be executed apart from ground or naval operations. Unconstrained by water or terrain, airpower has the unparalleled ability to transcend these mediums and carry out its wide-ranging effects. Finally, if air forces have a unique mission, then it is logical that air forces should be a distinct military arm, independent of other services. So, how does centralized control by an airman fit into this line of thought? Frankly, centralized control by an airman logically flows from these themes. If one accepts that airpower is unique and accomplishes an independent mission, it follows that it requires skilled personnel, aviators, to execute its mission. Aviators, understanding airpower's capabilities, limitations, and distinct perspective, are best suited to apply it at all levels of war, tactical, operational, and strategic. Therefore, by promoting any of the themes listed above, centralized control by an airman is the natural foundation upon which those themes stand. Based on this line of logic, this study will proceed to examine how each of the classical theorists, Douhet, Trenchard, and Mitchell, whether stated in exact terms or not, by supporting these themes, advocated centralized control of air forces by an airman. The following is evidence for their view on the airpower themes listed above.

The Classical Airpower Theorists on Centralized Control

Giulio Douhet

On the subject of airpower's offensive nature, it is important to remember that Douhet was a witness to the horror of trench warfare. The cult of the offensive that ground to a defensive stalemate on the Western Front was brought on, in the words of Douhet, by the "increased power of firearms."[1] In Douhet's estimation the advent of such weapons as the machine gun had ground the war to a halt, negating the traditional offensive mentality of ground commanders. Furthermore, he reasoned, "Since war had to be fought on the surface of the earth, it could be waged only in movements and clashes of forces along lines drawn on its surface."[2] The dilemma, according to Douhet, could only be solved by airpower, because of its speed and "independence of surface limitations."[3] He stated, "The airplane is the offensive weapon par excellence."[4] He falls short of stating the aircraft is inherently offensive in nature, instead he reasons by means of economy of force that the aircraft is preeminently offensive, because in the defense twenty times the number of aircraft would be needed to defend against the enemy's air forces.[5]

Command of the air is yesterday's parlance for air superiority. That is control of the air to induce freedom to attack and restrict freedom from attack. Given the title of Douhet's greatest work on airpower, one is safe to assume his enthusiastic support for this endeavor. He characterizes the surface of the earth as "the coastline of the air" and just as a navy defends the coastline through command of the seas, so does an air force defend its coastline through command of the air.[6] Command of the air, he reasons, is best attained by preventing the enemy from flying in the first place, which logically leads back to

airpower's offensive-striking capability. What is most stunning is that Douhet recognized the significance of this so early. As early as 1910 Douhet had predicted the importance of gaining command of the air, and as Phillip Meilinger points out, he predicted this only two years after Italy's first flight, seven years after Kitty Hawk.[7] In Douhet's words, “To conquer command of the air means victory; to be beaten in the air means defeat and acceptance of whatever terms the enemy may be pleased to impose.”[8] This from a man who was never even a pilot.

Douhet's thoughts on an autonomous mission and an independent air force are practically synonymous. Since to conquer command of the air was everything to Douhet, and since, only by striking the enemy's air forces before they can be brought to bear on a country can command of the air be attained, he reasoned that only an air force can accomplish this most essential task. For to strike at an enemy's air forces means to strike him in the air, on the ground, and at his production facilities, all of which are found in a country's interior. Therefore, only the airplane can accomplish this task.[9] Furthermore, since the army and navy cannot assist in this destruction at the heart of a country's interior, only an “organically self-sufficient and independent” air force can accomplish this task.[10] Without independence, Douhet acknowledges there will still be aerial warfare, but subject to land and sea operations, and counterproductive to conquering command of the air. Douhet believes a nation with an independent air force is equipped to conquer command of the air, then accomplish what only the air force is capable, namely the destruction of the enemy's material and moral resistance.[11]

Trenchard was an infantryman first. As such, he was well versed in the offensive mind-set of the day. This mentality appears to have translated into his later role as an aviator too. There was never any doubt as to his belief that the airplane was an offensive weapon. Author Robin Higham, writing about Trenchard, stated, “Yet he remained a soldier in his approach towards operations. He believed in the offensive and that the air arm was solely an offensive weapon.”[12] In 1915, Trenchard and Commandant de Peuty, Commander of the French Air Force, agreed that the best way to deal with enemy air forces was to destroy them before they arrived at the front. Trenchard held firmly to his beliefs, even in the face of loss rates more than double the German's losses. In September 1916, he summed up his offensive policy in an order to his air forces. In it he states, “The aeroplane is an offensive and not a defensive weapon.”[13] He then proceeded to explain this premise, reasoning it impossible for aeroplanes to defend against determined enemy air forces flying in massive formations. He noted recent lessons learned when the French reallocated air forces to the defense of its ground component. Thereafter, the French air force found itself increasingly on the defensive, having given the initiative to the Germans who took full advantage of the situation. Not until the French reasserted their offensive posture did they regain air superiority. Trenchard further reasoned the British policy of incessant offensive action compelled the enemy to dedicate a portion of his air forces to the defense. This early World War I experience solidified Trenchard's already offensive mind-set, a mind-set and policy that would persist throughout the interwar years.[14]

Similar to Douhet, Trenchard's offensive doctrine drove his thoughts on command of the air or air superiority, although, his views on attaining air superiority matured after the war. As Meilinger points out, "Trenchard argued that, first, one had to attack enemy airfields to keep Germans out of the sky and thus ensure air superiority for the Allies."[15] His philosophy was to strike at the enemy offensively causing him to divert forces to the defense. Trenchard believed an incessant offense would ultimately win air superiority. Postwar, he realized that attacking airfields alone would be inadequate, as during the war his Independent Air Force was only slightly effective. In this way, he predicted large air battles on the road to air superiority. Once one side prevailed, the other was free to concentrate on strategic effects.[16]

As with air superiority, Trenchard's views on an autonomous mission also evolved over his career. In World War I, he was adamant about airpower's role in support of the ground component. This is attributable to his loyalty and respect to Field Marshall Haig, British First Army Commander. During Trenchard's first command experience in France, he was attached to Haig's First Army as a wing commander. They worked closely together and developed a mutual respect for each other. Although Trenchard advocated what he termed strategic bombing, he envisioned a concerted effort from both ground and air forces to affect the enemy. His target list for strategic bombing resembled that which, today is called interdiction. This reflects his wartime philosophy of airpower's support for the ground forces, but may also be rooted in his acknowledgment of the lack of capability of aircraft in that period. Perhaps he was a realist and his target list reflected only that which his air forces could possibly affect. As Meilinger points out, "Trenchard himself later maintained, his bombers had neither the range nor the mass to carry out effective

strategic strikes."[17] This may explain the contention that his Independent Air Force did not strike strategic targets, but only those military targets just beyond the corps area of operations. In other words, had he the capability, Trenchard would have surely struck deeper into enemy territory. Therefore, Trenchard did not necessarily believe the air forces were married to the ground component. During World War I, he was ultimately concerned about leaving ground forces unprotected during a time of scarce and dwindling resources. After the war, he deepened his resolve that airpower could wage psychological effects upon the enemy, a mission best performed by strategic bombardment.[18]

Following World War I, Trenchard was appointed by Winston Churchill to be Chief of the Air Staff and, in the face of shrinking budgets and fierce opposition from the other services, Trenchard fought incessantly to maintain the independent RAF. He revamped the organizational and administrative structure of the air force and devised an independent mission to ensure its survival in a postwar economy. The mission was air control of colonial territories, significant in that it ensured the survival of the RAF. By 1922, fear of a deteriorating air force in the face of growing European powers, namely the French air force, inspired British leadership to invest more heavily in the growth of the RAF. Trenchard took advantage of the timing and growing fears. In a speech on 13 April 1923, Trenchard stated, "In the next great war with a European nation the forces engaged must first fight for aerial superiority and when that has been gained they will use their power to destroy the morale of the Nation and vitally damage the organized armaments for supplies for the Armies and Navies."[19] This was an indication of his belief in a mission only airpower could execute. Although, unlike Douhet who argued that alone airpower could break a nation's will to resist, Trenchard believed that airpower

could create conditions for the ground component to secure the advantage. Regardless, both men agreed that airpower had the capability to autonomously set the conditions for early peace. The bottom line is that Trenchard fervently believed in the need to primarily secure air superiority, in airpower's offensive nature, and airpower's autonomous mission to psychologically affect the enemy through strategic bombing.[20]

William Mitchell

Even though Mitchell's second book is titled *Winged Defense*, he unequivocally believed airpower is best used offensively. The following excerpt from the book makes it clear that his views on this issue had not changed since the war.

> It was proved in the European war that the only effective defense against aerial attack is to whip the enemy's air forces in air battles. In other words, seizing the initiative, forcing the enemy to the defensive in his own territory, attacking his most important ground positions, menacing his airplanes on the ground, in the hangers, on the airdromes and in the factories so that he will be forced to take the air and defend them. To sit down on one's own territory and wait for the other fellow to come, is to be whipped before an operation has even commenced.[21]

As with his predecessors, Mitchell knew that to take advantage of airpower's offensive strengths, control of the air had to be won. In *Winged Defense* Mitchell concedes that no air defenses had yet been conceived that can thwart an air attack and in that vein, only an airplane can defend against an airplane. Therefore, he predicted great air battles over air supremacy. Once established, air forces can fly over another country at will. He reasoned that armies and navies would be paralyzed without air supremacy. Air supremacy is paramount to conducting a swift, decisive war, unlike the European war of attrition that ruined millions of lives.[22]

Mitchell makes it clear in his memoirs that he believed airpower would have been the decisive factor in the First World War had it lasted until 1919. By then, the U.S.

would have sufficiently built its air forces to be able to conduct the type of strategic air offensive he envisioned. Whether that is true or not may never be known, but one thing is certain, Mitchell's belief in a strategic role for airpower never wavered. Once air control is achieved, air forces can fly over armies and navies and paralyze vital centers of a nation. Mitchell wrote, “The influence of airpower on the ability of one nation to impress its will on another in an armed contest will be decisive.”[23] This was the autonomous mission that would warrant airpower's independence from the other services.

His motivation for an independent air force grew stronger after the war. He once admitted airpower's limited role in support for other services, but over time changed his sentiments. By the time he wrote *Winged Defense*, he still believed in airpower's decisiveness, but even more to the degree of the other service's obsolescence, especially the Navy. He conceded the Army would always have some use, but not until control of the air was attained. Regardless of what he thought of the other service's roles and functions, what is important is his unwavering belief in an independent air force, performing its autonomous mission, free from the constraints and controls of the other services, whether in peacetime or wartime. This message he fervently peddled until his dying day for on this point Mitchell was clear, “The greatest deterrent to development which air forces combat in every country is the fact that they have had to be tied up to armies and navies.”[24]

Even though some of the finer details evolved over their lifetime, all three classical theorists stood steadfast on their basic assumptions and theories. They varied in their approach, but they all agreed that airpower is offensive in nature, that to gain command of the skies is paramount, that airpower is unique, therefore it has an

autonomous mission, and lastly, airpower should be independent from the other services. Because they believed in these four themes, they undoubtedly believed in the concept of centralized control of air forces by an airman, because an airman has the unique perspective to capitalize on airpower's strengths. Therefore, an airman must maintain centralized control. With this basic tenet, centralized control by an airman, established in basic airpower theory as illustrated through the teachings of the classical airpower theorists, then how did this tenet ultimately get dropped from official doctrine upon entry into World War II? Were the classical theorists influential upon U.S. airpower's doctrinal development process?

The Air Corps Tactical School on Centralized Control

In 1920 emerged an institution that was to have profound influence upon the doctrine and development of the Air Service throughout the interwar years. In early 1920 Air Service leadership sensing a need for higher education gained War Department permission to stand up eleven special service schools for the Air Service, one of which was located at Langley Field, Virginia. It was this school that became the Air Service Field Officer's School and in 1922 changed its name to Air Service Tactical School (ASTS). On 18 August 1926, in keeping with the newly named Army Air Corps (AAC), the name of the school was changed to the Air Corps Tactical School (ACTS).[25]

From its inception its name implied tactics or tactical level of war and, for a time, its charter was to instruct air tactics and techniques for direction of air units in cooperation with other military branches. During the first few years of its existence, the school focused primarily upon experiences of the First World War, namely observation

and pursuit aviation in support of ground forces. By the mid-1920s, the focus began to change and instructors at the school began to ponder the doctrinal requirements for an offensive air force. The very themes described above, espoused by classical airpower theorists, that airpower, inherently offensive, could autonomously strike at the enemy's war-making capacity, began to grow in prominence. ACTS instructors changed their focus from pursuit in support of ground forces to a striking force capable of influence well beyond ground operations. Since the bomber was the primary vehicle from which to wage this type of warfare, with time the bomber became the main element of ACTS focus. The bomber, being the most important element of the Air Corps, its accompanying strategic doctrine far outpaced other forms of aviation doctrinal development. This is important to note as it relates to the concept of centralized control by an airman. As established within this study, centralized control by an airman originated with the theories of early airpower theorists, but because centralized control by an airman is so fundamental a concept, to understand its evolution into official doctrine, it is important to understand the general course of doctrinal development during the interwar years.[26]

Understanding the facets of interwar doctrinal development is key to understanding the doctrine with which the U.S. would subsequently enter World War II. Although the ACTS played a prominent role in this period, the interwar years were laced with the intricacies of the interrelationships between political leadership and the Army General Staff on one side of the fence and Air Service leadership and ACTS instructors on the other. Airpower's future was hanging on the balance between airpower's support role, as envisioned by traditional Army leadership, and airpower's emerging strategic role, as envisioned by a growing number of Army aviators, particularly at the ACTS.

Adding to the confusion over airpower's strategic role, the Navy too argued its place of primacy over Army aviation. However, U.S. strategic policy, also a key determinant of the outcome, was dictated by politics and geopolitical considerations of the day. U.S. policymakers were seesawing between a coastal-defense military and one engaged in an all-out offensive in Europe. While politicians struggled with overall U.S. strategic policy, airpower advocates struggled with developing airpower's future in relation to all these variables, the traditional Army and Navy and national defense policy.[27] What emerged from this debate would help answer the question of whether an independent air force, with an autonomous mission, was the accepted method of U.S. airpower employment or whether the Air Corps would remain subservient to the Army. What developed was a cadre of aviators, schooled in the ACTS-style of airpower theory, doctrine, and employment, but ruled by the Army General Staff and U.S. strategic policy. In the end, compromise generally ruled the day to the detriment of all.[28]

Before describing the doctrinal development of the period, it is important to note that the Office of the Chief of the Air Corps, amidst a myriad of other duties, had to call upon other offices to assist it in matters pertaining to airpower. In the realm of doctrine, it called upon the ACTS and the Air Corps Board, both closely aligned, to assist in the development of airpower doctrine.[29] The Air Corps Board was formed to study "such subjects pertaining to the Air Corps" with the aim of "improvement of the Air Corps."[30] The school and the board were closely aligned, because not having enough senior Air Corps officers, the commandant of the school and several staff members were regulars upon the board. Finally, the Chief of the Air Corps often called upon the ACTS to study problems concerning airpower originating from the War Department.[31] Especially during

the second half of the 1930s, ACTS often reviewed and edited all Air Corps Board reports on the way to the Chief of the Air Corps and, because of this close association, "the mutual cooperation between both organizations ensured they spoke with one voice."[32] This clearly demonstrates that the faculty, staff, and students of the ACTS were in a most advantageous position to influence the direction of aviation doctrine and employment.

With the emergence of the AAC in 1926 and the growing strategic mindedness at the school, a look at the prevailing doctrine of the day reveals the level of polarization already in existence between the opposing sides of the airpower issue. Training Regulation (TR) 440-15, *Fundamental Principles of the Employment of the Air Service*, dated 26 January 1926, contained the expressed views of the War Department and General Staff. It stated, "The organization and training of all air units is based on the fundamental doctrine that their mission is to aid the ground forces to gain decisive success."[33] Furthermore, it declared, "The mission of the Air Service is to assist the ground forces to gain strategical and tactical successes by destroying enemy aviation, attacking enemy ground forces and other enemy objectives on land and sea, and in conjunction with other agencies to protect ground forces from hostile aerial observation and attack."[34] Overall, it advocated that the Army's primary objective as the destruction of the enemy's fielded forces and the air arm's role in supporting this endeavor. In terms of control of air forces (i.e., whether or not centralized control by an airman), TR 440-15 held to the traditional view of parceling out air units to ground commanders, but acknowledged others, some bombardment and pursuit, may be a part of General Headquarters (GHQ), apart from direct control of tactical ground commanders.

Specifically, it stated, “Some units always operate as organic to ground units or may cooperate by indirect support in the area of the ground battlefield or at a distance therefrom.”[35] Although a doctrinal acknowledgement of a “special mission” that airpower could perform “at great distances from ground forces,” still centralized control by an airman was far from a doctrinal reality.[36]

The opposing view was contained in an ASTS text of April 1926 for a course entitled *Employment of Combined Air Forces* (later simply called the *Air Force*). The authors, although unknown, encapsulated the majority view of fellow aviators and what came to be the core doctrine of the ACTS through 1941. The text advocated the air force as an equal to the Army and Navy in execution of national war policy, in stark contrast to the prevailing attitude of the War Department and General Staff that the Air Corps was subordinate to the ground force. More importantly, by giving much more credence to the GHQ air force, the text laid strategic bombing's doctrinal foundation by blatantly declaring the primary goal of warfare was to destroy the enemy's morale and will to resist, rather than destroy the enemy's fielded forces. Regarding control of airpower, the text differed from TR 440-15 in that it gave much greater significance to the GHQ air force, therefore in the direction of centralized control, thus further aggravating the rift between the Army General Staff and the AAC, the rift being the General Staff's concern over adequate attack aviation and the AAC's greater emphasis upon airpower's strategic role; both sides seemingly believing that it was a question of one or the other with no middle ground.[37]

The 1930s were marked by an increase in the capabilities and design of bombers as set forth by Air Corps leadership and the ACTS. As the reality of bigger and better

bombers came to fruition, doctrine development grew in steady proportion. The instructors, and in some cases, the students at the ACTS, now located at Maxwell Field, Alabama, took the lead in airpower's doctrinal development. The point of departure for doctrine development was in many ways set forth in the *Air Force* course text of 1926. During the 1930s, fueled by the rapid development of bomber capabilities and the influence of men, like Mitchell, the concept of airpower's strategic role expanded. Mitchell, although out of active service, continued to be a strong voice for airpower, especially in the realm of strategic bombardment. According to Thomas H. Greer, an Air Force historian, both Mitchell and Douhet had, to some degree or greater, considerable influence upon the thinking and subsequent doctrine development occurring at the ACTS during this time period. Greer wrote, "The evidence indicates that American airmen found inspiration and support from the ringing claims and predictions of the two air prophets."[38] Of Mitchell's influence upon the ACTS, he specifically writes, "Instead, the texts, lectures, and doctrinal papers there smacked of the ideas of Billy Mitchell."[39] When ACTS instructors illustrated the principle of mass, Greer notes that they cited St. Mihiel and Meusse-Argonne as effective examples, further indications of Mitchell's influence.[40] Finney, in his history of the ACTS, notes, "If one person were to be singled out as having had the most decided influence on the school, it would probably be Brig. Gen. William Mitchell."[41] Citing more evidence of Mitchell's influence, Brigadier General Lawrence S. Kuter in a 1942 interview recalls that two of Mitchell's aides Lieutenant K. N. Walker and Captain Robert Olds were responsible for courses in bomber instruction at the ACTS.[42]

Of Douhet, both Greer and Finney could find no hard evidence of direct use of his writings, but Greer claims Douhet's basic ideas were well known at the school, reminding readers that in Hap Arnold's memoirs, Arnold admits the school had been teaching Douhetian theories as an abstract science for several years. In Raymond Flugel's doctoral dissertation, he concluded that Douhet, not Mitchell, was the primary derivation of ACTS doctrine, at least up until 1935.[43] This is quite the opposite of Finney's conclusion that Douhet was never in vogue at the ACTS, because high-altitude precision-daylight bombing, as advocated by ACTS, does not mix well with Douhet's concept of mass area bombing.[44] Whether Mitchell or Douhet or both influenced ACTS is beside the point. One or the other or both did. In the case of Mitchell, then Trenchard had a hand in influencing the school indirectly too. Nevertheless, the point is that the connection is established. The themes of the classical airpower theorists, who wrote about and practiced aviation from its earliest inception, clearly influenced either directly or indirectly, nevertheless profoundly, the doctrine developed at the ACTS. If the four themes laid out earlier in this chapter had indeed taken root at the ACTS, and they had, then it must be believed that centralized control by an airman was among ACTS core beliefs.[45]

As U.S. strategic policy was in a defensive mode, it was unpopular at the time to advocate offensive warfare in the strategic sense. As noted in the first chapter, the strong isolationist mood dictated much of this sentiment. The problem for airpower advocates was how to build a strategic air force, which was very much offensive in nature, within the homeland defense policy of the U.S, against the preference of traditional Army leadership, while competing for scarce budgetary dollars. In the early 1930s, ACTS texts

supported the defensive policy, but advocated airpower's bomber capability as the defensive weapon of choice, claiming it could undertake attacks against the aggressors. To practice this application, ACTS instructors, in an effort to remain discreet, chose a U.S. exercise scenario with targets located well within the U.S. This allowed them to theorize hypothetical strategic-bombing campaigns without appearing to disregard U.S. strategic policy. In this way, the ACTS was beginning to disassociate itself with a purely defensive-minded role and increasingly grasp airpower's offensive, strategic capability. It is important to note that this was envisioned and performed within the context of an autonomous organization outside the span of ground control. In a 1934-1935 text, the ACTS implied that the tactical ground commander should not exercise responsibility beyond his control and that control of the air force should rest with the GHQ commander, a step closer to realizing centralized control by an airman.[46]

During the decade of the 1930s, with strategic bombardment doctrine firmly entrenched, Greer notes, "The general theory of employment of airpower rested upon the assumption that the traditional principles of war applied to the air force."[47] This acknowledgement gave credence to the Air Corps' growing notion that it possessed a decisive force, capable of offensive operations directed at the enemy's will to resist. Now, airpower advocates openly acknowledged that even in a defensive bomber mode, airpower acted offensively. Hence, the first three themes advocated by classical airpower theorists, as described earlier in this chapter, had clearly taken root. ACTS instructors, unwavering that command of the air was essential, now firmly grasped airpower's offensive capability made manifest in its autonomous mission, strategic bombardment. By the mid-1930s, within the crosshairs of the Norden bombsight and upon the wings of

the B-17, the embodiment of the Air Corps' strategic doctrine took flight.[48] Unfortunately, as bombardment doctrine took firm root, other forms of aviation doctrine fell into neglect, as the ACTS position was auxiliary airpower could only be developed at the expense of bombardment.[49]

The first three themes firmly established within ACTS teachings, how did the question of independence fit into their thinking? Greer notes that within the AAC there were two schools of thought concerning complete autonomy. While most would probably acknowledge complete independence as the ultimate goal, some focused mainly upon this end, while others were willing to compromise some autonomy in order to build a striking force. The former group was relentless in their pursuit of an independent air force, arguing that the AAC could not meet the demands of national defense under the control of the Army, whose priorities and focus were not air defense. The War Department conceded to this notion with the creation of the GHQ Air Force in 1935, a major step towards full independence. See figures 6 and 7. With the establishment of the GHQ Air Force, the latter group prevailed, but only for the time being.[50]

As stated earlier, true centralized control by an airman could not be fully realized until complete independence was achieved. Airmen took another step closer toward that realization, when the GHQ Air Force was created. Figures 6 and 7 illustrate Army organization before and after 1935. This concept was born out of experiences of World War I. Apart from air units assigned to tactical ground components, the idea was to assemble a striking force capable of attacking behind enemy lines, directly controlled by the GHQ reserve commander, presumably an airman. This concept strongly resembles the mass and concentration of airpower as controlled by Mitchell during St. Mihiel and

the Meusse-Argonne offensives in World War I. With aircraft limitations of that era, the idea never materialized, but with the evolution of the bomber in the early thirties, the idea once again came to the forefront.[51]

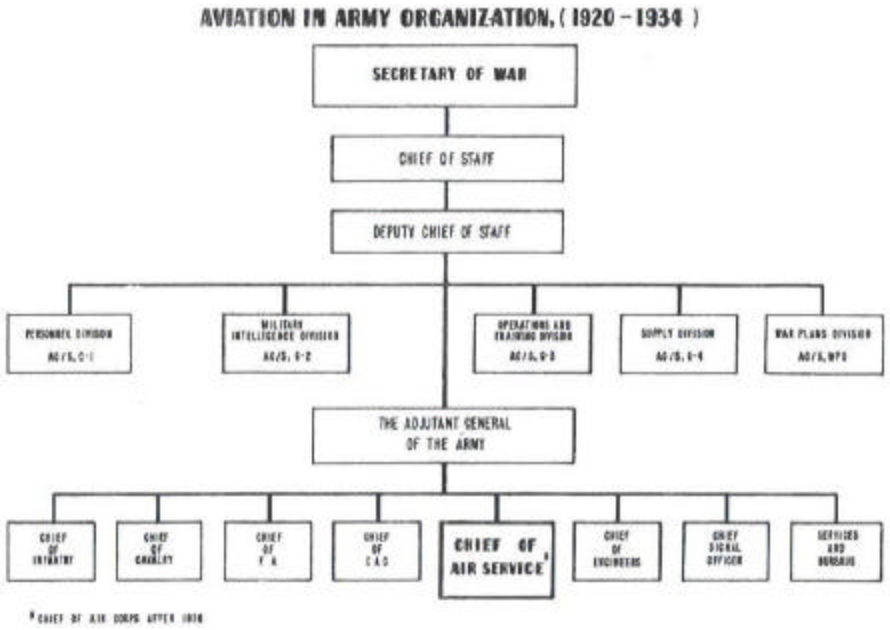

Figure 6. Aviation in Army Organization (1920-1934). *Source:* Thomas H.Greer, *The Development of Air Doctrine in the Army Air Arm, 1917-1941* (Maxwell AFB, AL: Research Studies Institute, USAF Historical Division, Air University, 1955; reprint, Washington, DC: Office of Air Force History, 1985), 144.

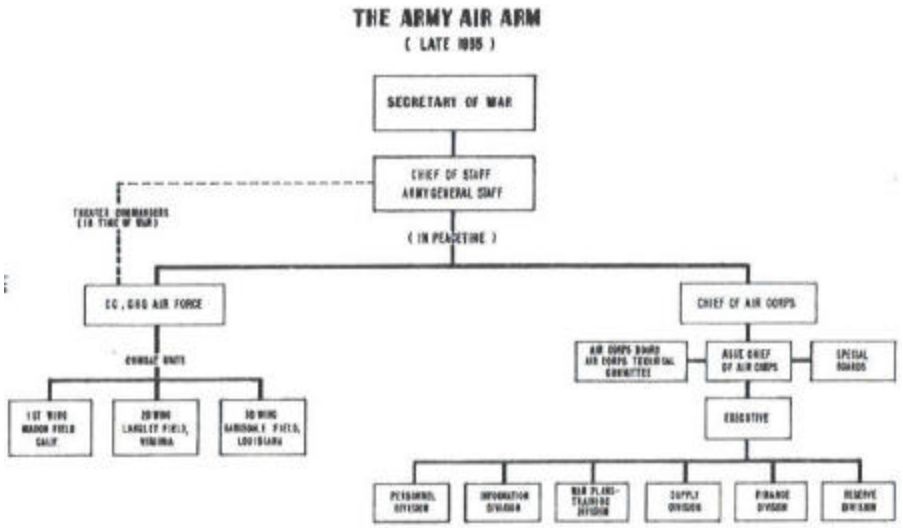

Figure 7. The Army Air Arm (Late 1935). *Source:* Thomas H.Greer, *The Development of Air Doctrine in the Army Air Arm 1917-1941* (Maxwell AFB, AL: Research Studies Institute, USAF Historical Division, Air University, 1955. Reprint, Washington, DC: Office of Air Force History, 1985), 146.

Organizationally, the GHQ Air Force was to be a tactical unit of the Army, and all combat air units located in the corps areas were consolidated under this new designation. The commanding general of the GHQ Air Force, an airman, reported directly to the Chief of Staff in peacetime and the theater commander in wartime. The Chief of the AAC, still in existence and equal in stature to the new commander of the GHQ Air Force, was responsible for supply and individual training. This structure, although an improvement, would prove cumbersome and would evolve, as depicted in figure 8, even more before U.S. entry into World War II. Although, not fully independent, an important step had been taken in that the War Department, in creating the GHQ Air Force, acknowledged that an offensive striking capability, capable of effects beyond the reach of ground forces,

was necessary. Despite this new development, overall, centralized control by an airman remained under the purview of the Army.[52]

Even before creation of the GHQ Air Force, traditional Army leadership set out to identify it as an all-purpose force whose main support was still that of the ground forces and in some instances falling directly under Army tactical leadership. ACTS instructors, of course, disagreed. In addition to espousing airpower's vast offensive capability, they had advocated the concept of centralized control by an airman, noting in *Air Force* course texts as early as 1930 that other countries had already recognized this principle as essential to effective airpower operations. The War Department reaffirmed the traditional Army philosophy with the revision of TR 440-15, dated 15 October 1935. In general, it acknowledged a GHQ Air Force with an independent mission in some cases beyond the "sphere of influence of the ground forces."[53] Although a vast improvement to its predecessor, overall, it still smacked of Army control. Nonetheless, ACTS instructors were unhappy with the limited role assigned to the striking force. While some AAC leaders were happy with the progress, it seems ACTS instructors, feverishly intense in their mission, often remained discontent with the slow progress of change. Hence, the struggle over control of the air force continued.[54]

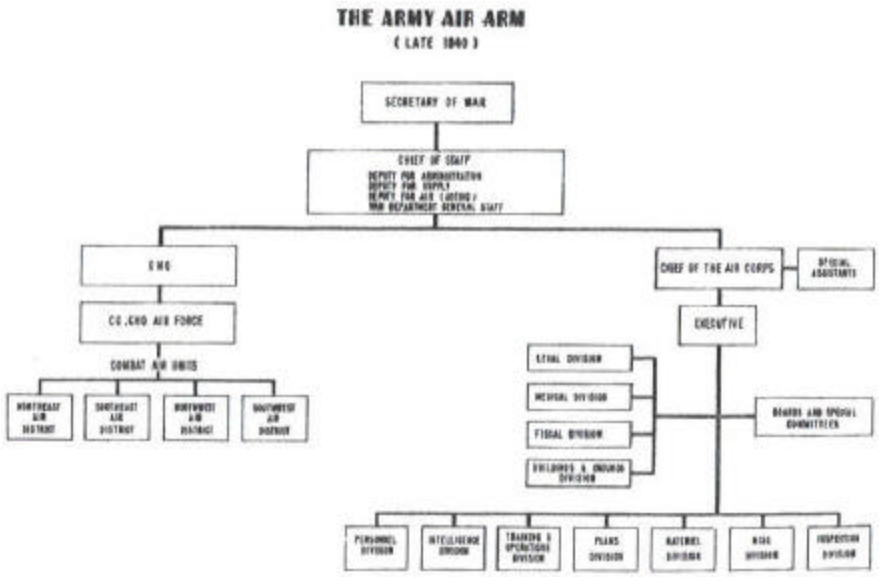

Figure 8. The Army Air Arm (Late 1940). *Source:* Thomas H.Greer, *The Development of Air Doctrine in the Army Air Arm, 1917-1941* (Maxwell AFB, AL: Research Studies Institute, USAF Historical Division, Air University, 1955; reprint, Washington, DC: Office of Air Force History, 1985), 147.

The 1930s was a decade of landmark events that helped direct the course of the AAC. As already discussed, these include the evolution of the bomber and accompanying doctrine and the creation of the ACTS and the GHQ Air Force. Two more landmark events helped turn the tide in favor of airpower advocates, the rise to power of Adolph Hitler and Franklin D. Roosevelt. Germany's rise from the ashes gave U.S. strategic policy new meaning, and with the election of President Roosevelt, airpower advocates gained a powerful ally. With the corresponding change in national strategic policy, the ACTS more freely developed strategic doctrine based on enforcing the Monroe Doctrine of hemispheric defense. No longer would ACTS instructors have to theorize about U.S. targets, now they could concentrate upon a hemispheric threat which would require

longer range and better-equipped bombers. As national policy became clearer, ACTS instructors also refined their doctrine. For example, they refined their interpretation of command of the air by adopting a counter-air force strategy as a matter of primacy. All this only strengthened their resolve that airpower was a unified force, inherently offensive, best employed under the principles of mass and concentration, and controlled by airman.[55]

By the end of the decade with war seemingly eminent, airpower advocates were increasingly emboldened to voice their theories of warfare and the role airpower played to that end. Their views, already discussed at length, were founded upon the doctrine adopted earlier in the decade at the ACTS, but now inflamed and on the eve of U.S. entrance into World War II, the great divide between ACTS doctrine and official War Department doctrine was even more evident. In ACTS lectures, instructors taught that airpower alone could be decisive, noting Germany's recent victory, when the three major powers England, France, and Russia bowed to the power that 3,350 German bombers could broker at the Munich Conference. From the Army's standpoint, their philosophy was evident in FM 1-5, *Employment of Aviation of the Army*, dated 15 April 1940. Greer notes, “The reason why FM 1-5 seems out of line with the trend of thought at the Tactical School is that the manual concentrated upon the assumption of a national defensive role, while instruction at the school concentrated upon the assumption of the offensive as a strategic role.”[56] Where FM 1-5 accentuated the defense, ACTS wholeheartedly endorsed airpower's offensive nature. Where ACTS was preaching the heart of the enemy's economic structure as a targeting concept directly affecting the enemy's means to resist, FM 1-5 was targeting the enemy's “war materiel.”[57] As ACTS instructors advocated

centralized control by an airman, FM 1-5 reminded the Air Corps of the ground Army's span of control by stating, “Portions of GHQ aviation, particularly of support forces and special forces, may be attached to large territorial or tactical commands (theaters of operation, departments, armies, or independent corps) for accomplishment of specific missions.”[58] While FM 1-5 largely held the official views of the War Department, to the rabid airpower enthusiast at the ACTS, it represented a compromise in that, although it somewhat acknowledged airpower's offensive capability, it did not proclaim airpower's alleged ability to paralyze a nation's will to fight; and, more importantly for this thesis, it still held to some form of Army control. Before U.S. entry into World War II, the Air Corps would move another step closer to full autonomy.[59]

In June 1941, under increasing pressure from advocates for aviation independence and complaints that the current configuration fragmented Air Corps authority, the Secretary of War instructed the Army to create the AAF (figure 9). This move put all the activities of aviation under one chief, who would also act as Deputy Chief of Staff for Air. Now, the Chief of the AAF had direct control over all aviation matters and served as the aviation expert to the Chief of Staff. The last of the four themes advocated by the classical airpower theorists was one step closer to completion, but upon the core issue, centralized control by an airman, traditional Army philosophy held steadfast.[60]

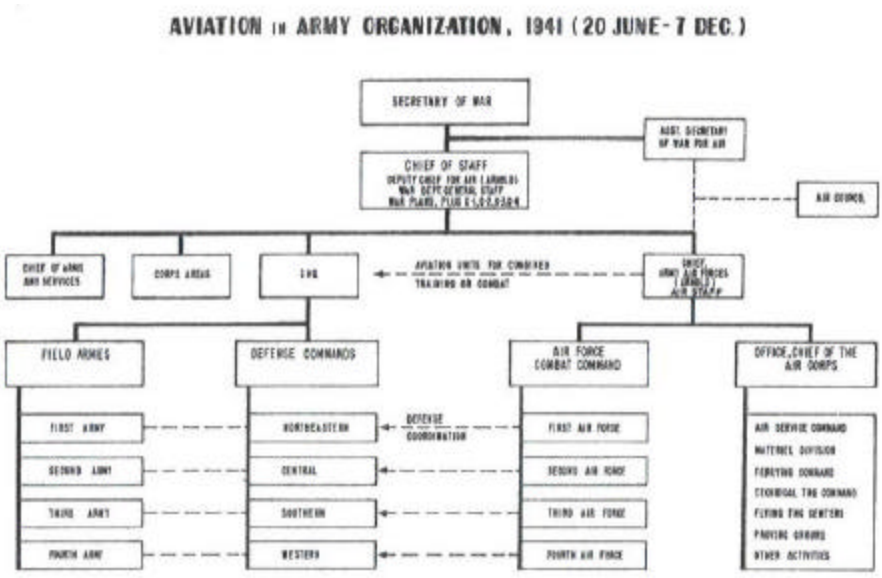

Figure 9. Aviation in Army Organization, 1941 (20 June-7 December). *Source:* Thomas H.Greer, *The Development of Air Doctrine in the Army Air Arm, 1917-1941* (Maxwell AFB, AL: Research Studies Institute, USAF Historical Division, Air University, 1955; reprint, Washington, DC: Office of Air Force History, 1985), 148.

Summary

The classical airpower theorists are important because they laid the foundation of basic airpower theory and whether literally stated or not, their basic theory espoused centralized control by an airman.[61] The four central themes they advocated could not be fully realized unless an airman centrally controlled airpower, yet centralized control was not codified into doctrine until well after U.S. entry into World War II.

Where the classical theorists laid the theoretical foundation, the ACTS built the framework of airpower doctrine during the interwar years. They built it in the textbooks and lectures at the school. They influenced it through their Air Corps leaders, the Air Corps Board, and the various other congressional boards and proceedings of the two

decades in question. Much of their influence wound up on the pages of official doctrine, but often it was dampened by official Army policy and War Department mentality. A list of ACTS instructors and attendees reads like a *Who's Who* among major World War II and postwar aviation leaders.[62] Their doctrinal framework set the pace of interwar airpower development and set the stage for the U.S. entry into World War II. The strategic concepts and doctrine they taught became the very essence of the air campaign plan used to defeat the Axis powers.

No doubt the ACTS was a driving force for airpower during the interwar years, but the tenacity was often tempered by a traditional Army mind-set that was still very much in control of official doctrine and tactics. From 1920 to 1940 small steps were taken with each printing of a new regulation or a revision of an old one. It is possible to read within the pages the give and take from both sides. By the late 1930s with the advent of the B-17, the rise of Nazi Germany, and the backing of President Roosevelt, the AAC took great strides in gaining much needed appropriations and attention from the War Department and Congress. Yet, where ACTS was so successful in some aspects, both ACTS and the traditional Army failed to adequately address other forms of aviation doctrine to the detriment of everyone involved. The very core of airpower doctrine, from which all other doctrine revolves, centralized control by an airman, was yet to be fully realized. This and other doctrinal shortcomings would, for the most part, be learned the hard way during the ensuing war. In the case of centralized control by an airman, the Allied North African campaign of 1942 and early 1943 would provide ample evidence of doctrinal neglect.

[1]Giuliot Douhet, *The Command of the Air*, trans. Dino Ferrari, in *Roots of Strategy*, Book 4, ed. David Jablonsky (Mechanicsburg, PA: Stackpole Books, 1999), 284.

[2]Ibid., 282.

[3]Ibid., 289.

[4]Ibid.

[5]Ibid., 290-291.

[6]Ibid., 293.

[7]Phillip S. Meilinger, "Giulio Douhet and Modern Airwar," in A864, *Seminar on the Evolution of Airpower Theory* (Ft. Leavenworth, KS: USA CGSC, 1997), 25.

[8]Douhet, 300.

[9]Ibid., 301.

[10]Ibid., 304.

[11]Ibid., 348.

[12]Robin D. S. Higham, *The Military Intellectuals in Britain, 1918-1939* (New Brunswick, NJ: Rutgers University Press, 1966; reprint, Westport, CT: Greenwood Press, 1981), 136.

[13]Major General Trenchard's *Order*, 22 September 1916; Quoted in Higham, 253.

[14]Higham, 253-256.

[15]Phillip S. Meilinger, "Trenchard, Slessor, and Royal Air Force Doctrine before World War II," in *The Paths of Heaven: The Evolution of Airpower Theory,* with a foreword by General Ronald R. Fogleman, ed. Phillip S. Meilinger (Maxwell Air Force Base, AL: Air University Press, 1997; reprint, Maxwell Air Force Base, AL: Air University Press, 2001), 45 (hereafter cited as Meilinger, "Trenchard").

[16]Ibid., 52.

[17]Ibid., 47.

[18]Ibid., 45-47 and 51.

[19]Ibid., 51.

[20]Ibid., 48-51.

[21]William Mitchell, *Winged Defense*, in *Roots of Strategy*, Book 4, ed. David Jablonsky (Mechanicsburg, PA: Stackpole Books, 1999), 502.

[22]Ibid., 489-490.

[23]Ibid., 508.

[24]Ibid., 499.

[25]Robert T. Finney, *History of the Air Corps Tactical School, 1920-1940* (Maxwell AFB, AL: Research Studies Institute, USAF Historical Division, Air University, 1955; reprint, Washington, DC: Center for Air Force History, 1992), 8-11.

[26]Thomas H. Greer, *The Development of Air Doctrine in the Army Air Arm, 1917-1941* (Maxwell AFB, AL: Research Studies Institute, USAF Historical Division, Air University, 1955; reprint, Washington, DC: Office of Air Force History, 1985), 29-30.

[27]For the purpose of this paper, the author has chosen to highlight the doctrinal differences between the traditional Army and the ACTS. The debate between Army aviation and the Navy, although important to note, is beyond the scope of this paper.

[28]Greer, 30-31

[29]Finney, 56.

[30]War Department, Army Regulation 95-20, *Air Corps Board* (Washington, DC: War Department, 9 November 1934), 1.

[31]Robert Frank Futrell, *Ideas, Concepts, Doctrine: Basic Thinking in the United States Air Force, 1907-1960* (Maxwell Air Force Base, AL: Air University, 1971; reprint, Maxwell Air Force Base, AL: Air University Press, 2001), 62.

[32]Peter R. Faber, "Interwar U.S. Army Aviation and the Air Corps Tactical School: Incubators of American Airpower," in *The Paths of Heaven: The Evolution of Airpower Theory*, with a foreword by General Ronald R. Fogleman, ed. Phillip S. Meilinger (Maxwell Air Force Base, AL: Air University Press, 1997; reprint, Maxwell Air Force Base, AL: Air University Press, 2001), 200.

[33]War Department, Training Regulation 440-15, *Fundamental Principles for the Employment of the Air Service* (Washington, DC: War Department, 26 January 1926), 2.

[34]Ibid., 1.

[35]Ibid., 2.

[36]Greer, 40-41.

[37]Ibid., 41-43; and Finney, 64.

[38]Greer, 50.

[39]Ibid., 48.

[40]Ibid., 54.

[41]Finney, 56.

[42]Ibid., 57.

[43]Raymond Richard Flugel, "United States Airpower Doctrine: A Study of William Mitchell and Giulio Douhet at the Air Corps Tactical School, 1921-1935" (Ph.D. diss., University of Oklahoma, 1965), 254.

[44]Finney, 58.

[45]Greer, 48-51; and Finney, 57.

[46]Greer, 52-54; and Finney, 71.

[47]Greer, 54.

[48]The 1930s was also marked by the refinement of strategic bombardment theory at the ACTS, namely high-altitude, daylight bombing. See Thomas H. Greer, *The Development of Air Doctrine in the Army Air Arm, 1917-1941* (Maxwell AFB, AL: Research Studies Institute, USAF Historical Division, Air University, 1955; reprint, Washington, DC: Office of Air Force History, 1985), 115-118.

[49]Greer, 54-55.

[50]Ibid., 72-73.

[51]Ibid..

[52]Ibid., 70-71.

[53]War Department, Training Regulation 440-15, *Fundamental Principles for the Employment of the Air Service* (Washington, DC: War Department, 15 October 1935), 5.

[54]Finney, 70 and Greer, 72-74.

[55]Greer, 76.

[56]Ibid., 114.

[57]War Department, Field Manual 1-5, *Employment of Aviation of the Army* (Washington, DC: War Department, 15 April 1940), 29.

[58]Ibid., 5.

[59]Greer, 103, 111-115.

[60]Ibid., 127.

[61]Mitchell, in his memoirs, actually does make reference to centralized control by an airman. While writing of Commander du Puety's struggles within the French Air Force, Mitchell writes, “I felt that until air forces were removed from the control of ground personnel, this condition would continue to exist. There should be a distinct line of demarcation between the air force and the army, as between the army and the navy.” See William Mitchell, *Memoirs of World War I* (New York: Random House, 1960), 25. Later in his memoirs, in regards to Trenchard's views on centralized control, he writes, “The only way to handle air power, in Trenchard's opinion, was to unify it all under one command,” presumably, in this author's opinion, under the control of an airman. See also Mitchell, 110.

[62]For a complete list of staff, faculty, and students during the two decades of ACTS activity, see Robert T. Finney, *History of the Air Corps Tactical School, 1920-1940* (Maxwell AFB, AL: Research Studies Institute, USAF Historical Division, Air University, 1955; reprint, Washington, DC: Center for Air Force History, 1992), 99-141.

CHAPTER 4

ANALYSIS AND CONCLUSIONS

The central theme this thesis addresses is the concept of centralized control and decentralized execution, a concept that has, over the decades, taken front row status as the Air Force's basic tenet. More to the point, this paper focuses on the origin of centralized control *by an airman*, the essence of the basic tenet. Centralized control of air forces by any other means is meaningless, for it is the airman who brings the skills, expertise, and sense of employment necessary to ensure airpower's unique capabilities are fully exploited. Without centralized control by an airman, airpower's inherent offensive nature, flexibility, and versatility are minimized. In essence, without centralized control by an airman the rest of airpower's tenets are marginalized. This is evident over and over again from examples in World War II, the Korean War, and the Vietnam War. Fragmented control of air forces has led to airpower being frittered away upon irrelevant, shortsighted objectives. For these reasons this topic is relevant and enduring, because only in recent history has the U.S. successfully structured its joint forces around this basic tenet.

Although real centralized control by an airman could not be fully realized until the Air Force gained its independence, it still took more than four decades before successful implementation in the joint arena. Finally, Operation Desert Storm provided the best example of centralized control by an airman since the Air Force gained its independence in 1947. As author Richard P. Hallion postulates in the opening paragraphs of his book, *Storm over Iraq*, "Simply (if boldly) stated, air power won the gulf war."[1]

Not to argue airpower's decisiveness or airpower's ability, or lack thereof, to win a war alone, instead this quote illustrates the degree of effectiveness airpower can achieve when its basic tenet is institutionalized. It is highly doubtful that airpower could have achieved the degree of effectiveness it did without centralized control by an airman. Hallion's opinion is not unique. Airpower's effectiveness in the Gulf War of 1991 was hailed from the Commander-in-Chief down.

It is clear from this study that centralized control by an airman existed in U.S. airpower's earliest combat iteration, the Battle of St. Mihiel. Mitchell's role as Chief of the Air Service, was undoubtedly an early version of the JFACC, or more appropriately the Combined Forces Air Component Commander, because Mitchell commanded French, British, and American combined air forces. Pershing left Mitchell in charge of the planning and execution of the air battle over St. Mihiel. In this capacity, Mitchell was left to prioritize the air objectives, allocate air forces in support of those objectives, and execute the air war, all in direct support of Pershing's overall plan. This command relationship heretofore never tried or codified by the U.S., nevertheless materialized because of Mitchell's vision and direction. This command structure, based on the concept of centralized control by an airman, continued through the Meusse-Argonne offensive until the end of the war. Therefore, the origin of centralized control by an airman is clear. The concept, as far as the U.S. military is concerned, originated with Douhet and Trenchard and materialized through the steadfast resoluteness of Mitchell. Whether Mitchell conceived of this philosophy on his own or after witnessing, firsthand, the battlefields and skies over the Western Front in April 1917 is unclear and, frankly, unimportant. What is important, though, is that Mitchell, with a large degree of influence

from the French and British air forces in World War I, solidified his core beliefs concerning airpower and had the courage of conviction to institute them; chief among them was centralized control by an airman.

Prior to 1917, to label Signal Corps aviation as American airpower would have been a gross overstatement. However, by the end of November 1918, the concept of American airpower had been realized and the long road of maturation lay ahead. With the close of World War I, the U.S. military had come of age as a dominant player. However, from an airpower perspective, U.S. involvement in World War I was both a curse and a blessing. It was a blessing in that it forced the U.S. to reconsider the airplane's military application. During the war, it forced the rapid development of combat aircraft and tactics, as the airplane was flung headlong into center stage or at least as supporting actor. Additionally, it was a blessing in that it built an early cadre of airpower advocates that would be key to its development through a tumultuous interwar period. It was a curse in that, although World War I airpower revealed many of the roles it was destined to fulfill, its developmental immaturity had fallen short of proving its worth to naysayers. According to hardliners, when it came to future military application, there was still doubt about airpower's contribution and plenty of room for improvement. Airpower had yet to prove itself adequately. In that doctrine is the guiding set of principles by which a military employs, this lack of proven performance, unfortunately, affected airpower's interwar doctrinal development. By the beginning of World War II, for the AAF it seems the concept of centralized control by an airman was lost, at least in the air-ground realm, but how?

Knowing the origin of centralized control by an airman, it then becomes important to understand the evolution of the concept before U.S. entry into World War II, because the problem will be that U.S. air forces employed in Operation Torch, culminating at the Battle of Kasserine Pass, will operate without it, under FM 31-35, *Aviation in Support of Ground Forces*, dated 9 April 1942. So what happened that airpower's first combat experience included centralized control by an airman, yet when called upon again, the ensuing iteration in North Africa did not? How could this be when American airpower, in general, evolved so profoundly during the interwar years? How could this be when, as already demonstrated, classical airpower theorists advocated centralized control by an airman and two of those classical theorists, Trenchard and Mitchell, were instrumental in U.S. airpower's first successful implementation of this basic tenet during World War I? The doctrinal outcome evidenced in FM 31-35 was as much a factor of the airman's doing as the traditional Army establishment. Unfortunately, as is often the case in a bureaucratic society, the doctrinal outcome was shaped by economic and political constraints, but more profoundly, it was shaped by doctrinal manipulation, not in a sinister sense, but in a natural evolutionary sense, because change can be difficult to institute.

Following World War I, aviators, enthusiastic over the prospects of airpower, instead found their air force systematically dismantled, physically and morally, in a postwar military drawdown. The military establishment was content to subjugate the air force to an auxiliary role. Those in the establishment apparently failed to see the promise of an airman's centrally controlled air force. As time passed following the end of the First World War, it became clear that to prove airpower's relevance, an airman would have to

redefine airpower's role in warfare. They would have to contrive a mission so unique that only airpower could accomplish it. Once contrived and instituted, airpower's fate and future would be secured. Hence, they turned to the classical airpower theorists and the role of strategic bombardment.

Against the backdrop of a postwar drawdown, airmen would fight for two long decades to overcome economic obstacles. Economic constraints are primarily evident in that as long as the Air Service was a part of the U.S. Army, it would have to compete within an establishment that was hardly anxious to share its scarce budgetary dollars on airpower research and development or towards maintaining a large standing air force. In that vein, the nation's Great Depression and the ensuing economic malaise did not make the military an entity that either the U.S. government or public were willing to spend a great amount of resources on. Additionally, when Congress did mandate dollars towards the AAC, those dollars were generally earmarked towards developing the concept of long-range, strategic bombardment, first in the form of coastal or homeland defense, then in the offensive sense envisioned by classical airpower theorists and those at the ACTS. This meant relatively little thought or money was invested in the development of other forms of aviation, including the accompanying doctrine.

Political constraints are evident in several ways. The term political, in this case, refers not only to that dealing with the government or current administration, but also within the Army system, for example the War Department, the General Staff, and those leaders advocating for the traditional Army mind-set. Because airmen chose to gain relevancy with their new instrument of war by boldly proclaiming airpower's role as a strategic platform, the traditional Army and Navy establishment was suspect of their

motives. The traditionalist within the Army viewed airpower as subordinate to the ground commander and with the airman's growing enthusiasm for an independent air force, the Army establishment grew ever more concerned that tactical airpower would fall by the wayside. This concern later turned out to be well founded. The Navy establishment, on the other hand, was greatly concerned that the AAC was muscling in on their turf, so to speak. Remember the interwar years were laced with an isolationist sentiment. This isolationism influenced U.S. strategic policy away from anything that resembled armed aggression. For an aviation community hell-bent on strategic bombardment, this did not bode well. To make small strides in the desired direction, airmen had to peddle their concept of strategic platforms as a coastal defense force, traditionally the Navy's responsibility. Of course, these political constraints influenced the economic ones mentioned above. In many ways, it was a fight for dollars and because the traditional military system had well-established inroads to the Congress, influence was easier, and AAC appropriations were difficult to acquire.[2] Airpower recognition in the form of congressional appropriations was a slow, uphill battle that would not see overwhelming support until President Franklin D. Roosevelt made it clear that he was an airpower advocate. Finally, near the close of the 1930s, airpower had the political clout it desired, but it was almost a little too late. Roosevelt had seen what he perceived to be airpower's bargaining strength at the Munich Conference, when Germany won appeasement by the threat of its massive air force. Roosevelt decided it was high time for the U.S. to build its own. Hence, large appropriations were thrown at the development of a strategic air force, leaving tactical airpower in the lurch.

As the economic and political constraints of the two interwar decades worked for the most part to limit airpower's development, two factors directly affected the doctrinal manipulation that created the conditions for failure in North Africa in 1942 and early 1943. The first factor is evident in the sense that the Army establishment was averse to change, not just in terms of airpower, but as noted earlier, it was averse to change concerning the evolving face of its own ground forces. For example, prior to entry into World War II some in the Army were reluctant to accept the fact that the horse cavalry was obsolete. Horse-mounted cavalry had a proud tradition within the military establishment, why should a little thing like mechanization change anything? In this sense, airmen were fighting an establishment steeped in tradition and, in the Army's view, the airplane was just the latest contraption trying to buck the system. It is the Army's job to win the nation's wars; therefore, the airplane's primary purpose is to support the Army in that endeavor. This was the prevailing attitude in the War Department and among the General Staff, and it is somewhat understandable why they thought as they did. History was on their side. The burgeoning air force had little, if any, historical precedence. Army tradition exists for a reason; it has a historical basis. Who were these airmen who boldly proclaimed strategic bombardment as the end all be all? All they had was a theory, hardly proven in the last Great War and hardly any improvements since that time. Furthermore, the Army establishment was slow to accept a strategic air force concept, because a strategic air force meant an independent air force, and an independent air force meant the Army would lose direct control of tactical air support. Concerning aviation, the loss of tactical air support was the Army's biggest fear.[3]

Where the Army was averse to change, the AAC was myopic in its approach to it. It focused too heavily upon strategic bombardment. This was the second factor that affected doctrinal manipulation. AAC leadership and ACTS staff and instructors focused so intently upon developing airpower's strategic role that they tended to place other forms of aviation doctrine in lesser importance.[4] This overemphasis upon strategic bombardment doctrine, especially in the form of high-altitude, daylight bombing, to the detriment of other doctrine, hurt the AAC and the military in general on at least two counts. On both counts, airmen's focus on strategic bombardment virtually blinded them to all else. First, pursuit aviation, despite the efforts of Claire Chenault, failed to gain the prominence it needed to develop an adequate escort doctrine until the Eighth Air Force's bloody European campaign of 1943. Second, despite the efforts of George Kenney, attack aviation failed to evolve both physically and doctrinally during the interwar years. Exactly that which the traditional Army establishment was afraid of came to fruition over the skies and on the ground of North Africa in 1942 through early 1943. From the airman's perspective, considering the economic and political constraints discussed, this approach is understandable. To make inroads within the Army establishment while competing for scarce appropriations, the AAC had one best shot at establishing its relevance in modern warfare and that was to make strategic bombardment the end all be all, just as classical airpower theorists had proclaimed it would be.

These two factors from competing sides of the issue worked against each other to manipulate doctrinal development in the general sense, as well as on the specific point of centralized control by an airman, especially in the realm of attack or air-ground aviation, which is where this thesis began its quest. The evidence is contained in the pages of

doctrine manuals beginning with TR 440-15 in 1926 through FM 31-35 in 1942. As stated earlier, the level of polarization from the competing sides, the War Department and Army General Staff on one side and AAC leadership and ACTS instructors on the other, was documented within the pages of these regulations and manuals. Levels of give and take are evident within each revision or creation of a new document and with each iteration of a new Air Corps command structure.

In 1926, TR 440-15 clearly stated the War Department's view that Army aviation's main purpose is to support the ground forces. However, as the ACTS gained prominence and its instructors grew bold in their doctrinal development, the opposing view they developed tended toward the other extreme.[5] The remaining years before U.S. entry into World War II were spent writing and rewriting doctrine in the form of manuals and regulations, each side compromising only slightly on its position.

In the case of the Army establishment, fear over losing tactical air support resulted over and over on its insistence in maintaining ultimate control of auxiliary airpower. The Army compromised on the issue of a special striking force, which began as simply an “air force” concept and later designated the GHQ air force. This GHQ air force evolved into the official GHQ Air Force of 1935, an even greater move towards Air Corps independence. The Army may have compromised on this issue because its interpretation of the GHQ Air Force's mission was much different from the Air Corps'. It envisioned an independent striking force capable of supporting its ground scheme of maneuver, while the Air Corps envisioned what the classical airpower theorists advocated, an independent, strategic bomber force.[6] In this sense, the AAC thought it was gaining ground doctrinally as well as organizationally and, to a certain degree, it was, but

in the Army's eyes, nothing had changed. It insisted upon an air force subject to ground commander's control and, doctrinally, it had one.

So the problem persisted. The ACTS staff and instructors, without historical precedence, promulgated strategic bomber doctrine and the Army General Staff, representing the establishment, persisted in its traditional mind-set. As quickly as ACTS turned out new doctrine or critiqued General Staff's proposed doctrine, the Army General Staff, holding the final vote, ultimately shaped the doctrine's final form.[7] This doctrinal manipulation by both sides of the aisle resulted in setting the doctrinal conditions for the misuse of airpower in the early stages of World War II.

Officially, the job of creating Air Corps doctrine fell to the chief of the Air Corps, but in reality, much of that work had been influenced through the efforts of the ACTS and the Air Corps Board. However, the ACTS was inactivated by June 1940, and the Air Corps Board, for a variety of reasons, was dismantled and also largely inactive by autumn of the following year. By this time the actual job of aviation doctrine development had become fragmented in the chaos of prewar reorganization. In June 1941, the newly named AAF were created and divided into the Office of the Chief of the Air Corps and Air Force Combat Command.[8]

As a result of the Louisiana Maneuvers of 1941 and growing concern that observation squadrons had not been under the direct care of the AAF, General Emmons, Commander of Air Force Combat Command, agreed with General McNair, Commander of GHQ Army, to create air support commands under Air Force Combat Command.[9] Although still attached to ground components, during the year these air support command groups would spend time training under the auspices of the AAF. More importantly, this

agreement established the responsibility for air support doctrine development. Air support elements under Emmons and McNair developed what turned out to be FM 31-35, *Aviation in Support of Ground Forces*, dated 9 April 1942. Originally thought to be only a draft, it was nonetheless published as written. Somehow, it had slipped through the cracks. There was no ACTS or Air Corps Board to review and critique it, as with previous regulations and manuals.[10]

The AAF, as a body of professional airmen, believed in the concept of centralized control by an airman. The concept, born in the minds of classical airpower theorists and cultivated over the Western Front in World War I, was at the center of a struggle between opposing forces on the same side. It was ultimately lost in the competing interests of opposing points of view. The Army establishment, maintaining its position as the nation's arbiter of war, was steadfast in its adherence to airpower's support role. Likewise, the Air Corps was fervent in its belief that strategic airpower was the answer. Hence, airpower's doctrinal development during the interwar years, in the form of regulations and manuals, shaped by political and economic constraints, was pulled in opposite directions and centralized control was caught in the middle, making a well-rounded aviation doctrine impossible. Yes, inadequate air-ground doctrine was the problem, but at its core was centralized control by an airman. The price for this unfortunate, somewhat understandable, yet all together necessary, blunder was paid for in the North African desert campaign, and both airmen and traditional Army leadership share the responsibility. Classical airpower theorists and interwar airpower advocates failed to develop a well-rounded doctrine of airpower employment, and the Army establishment

failed to accept the promises of airpower visionaries, by not placing their trust in a professional corps of aviation officers until overcome by events in Europe.

In many ways the final outcome was a product of the fragmented centralized control of the AAF in peacetime. True independence had yet to be established prior to World War II, and as such true centralized control could not have been attained. Therefore, in wartime the tactical results reflected an operational command structure very much like its peacetime counterpart, ultimately controlled by the Army.

This study has traced the origin and evolution of centralized control by an airman through the release of FM 100-20 in 1943. Today, USAF doctrine states, "Centralized control and decentralized execution of air forces are critical to force effectiveness. Air forces must be controlled by an airman who maintains a broad perspective in prioritizing limited assets across the range of operations."[11] Much has taken place since 1943 to shape the U.S. Air Force, but today, centralized control by an airman is finally integrated into joint doctrine. With the successful outcome of Operation Desert Storm and its doctrinal implications, the argument over centralized control by an airman should finally be put to rest. However, what of the other half of airpower's basic tenet, decentralized execution? With the military's technological evolution, technology has enhanced the ability to centrally control airpower, but now, in an interesting twist, the question becomes, has technology undermined or enhanced the other half of airpower's basic tenet, decentralized execution?

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[1]Richard P. Hallion, *Storm over Iraq* (Washington, DC: Smithsonian Institute Press, 1992), 1.

[2]Futrell, 62.

[3]Greer, 115.

[4]Ibid., 78, 87.

[5]Ibid., 30.

[6]Ibid., 72, 74, and 95.

[7]Futrell, 4, 62, 77-78, 88-89.

[8]Ibid., 88, 105-107

[9]As discussed in Chapter 1, the Louisiana and Carolina Maneuvers revealed some serious shortcomings in the realm of air-ground coordination and tactics.

[10]Futrell, 104-105, 107, and 132-133.

[11]Air Force Doctrine Center, Air Force Doctrine Document 1, *Air Force Basic Doctrine* (Maxwell AFB, AL: Air Force Doctrine Center September 1997), 23.

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