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AIR FORCE SUPPORT OF ARMY GROUND OPERATIONS
LESSONS LEARNED DURING
WORLD WAR II, KOREA, AND VIETNAM

BY

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purpose of this paper is to review U.S. Air Force support of U.S. Army ground operations during key campaigns in World War II, Korea, and Vietnam and to analyze lessons learned concerning the strategic and operational command, control, and coordination of Air Force employment of CAS and BAI missions in support of Army ground operations. Specifically, this paper looks at the North Africa, Italy, and Normandy campaigns in WWII, the Pusan defense in Korea, and the battle for Khe Sanh in Vietnam and then develops lessons learned.

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AIR FORCE SUPPORT OF ARMY GROUND OPERATIONS LESSONS LEARNED DURING WORLD WAR II, KOREA, AND VIETNAM

AN INDIVIDUAL STUDY PROJECT

by

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ABSTRACT

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CHAPTER I

INTRODUCTION

Current Joint Doctrine discusses direct air support of Army land operations in terms of close air support (CAS) and battlefield air interdiction (BAI). Close air support, as defined in Joint Chiefs of Staff (JCS) Publication 1, is air action against hostile targets which are in close proximity to friendly forces and which require detailed integration of each air mission with the fire and movement of those forces.[1] The document further defines air interdiction as air operations conducted to destroy, neutralize, or delay the enemy's military potential before it can be brought to bear effectively against friendly forces at distances from friendly forces that do not require detailed integration with the fire and movement of the friendly forces.[2] Furthermore, the Air Force and Army view battlefield air interdiction as a subset of air interdiction against targets which are in a position to have a near term effect on friendly land forces and, therefore, require joint coordination and planning at the component level.[3]

The Air Force supports the Army's Airland Battle doctrine which emphasizes the need for flexible, responsive air support to assist the land commander in taking the offensive in order to decisively win the battle. Both close air support and battlefield air interdiction have been cornerstone missions for the Air Force since World War II and have directly contributed to the

successful termination of key campaigns and eventual victories not only in World War II, but also in Korea and Vietnam, and the Air Force plans to continue to support these missions for the Airland Battle of the 1990s.

OVERVIEW

The purpose of this paper is to review U.S. Air Force support of U.S. Army ground operations during key campaigns in World War II, Korea, and Vietnam and to analyze lessons learned concerning the strategic and operational command, control, and coordination of Air Force employment of CAS and BAI missions in support of Army ground operations. Specifically, this paper looks at the North Africa, Italy, and Normandy campaigns in WW II, the Pusan defense in Korea, and the battle for Khe Sanh in Vietnam and then develops lessons learned.

ENDNOTES

1. Department of Defense, Joint Chiefs of Staff Publication 1, p. 70.

2. Ibid., p. 18.

3. U.S. Department of the Air Force, Air Force Manual 1-1, p. 7.

CHAPTER II

WORLD WAR II

Air Corps Manuals in early 1940 emphasized that successful joint air and ground operations were achieved with close coordination and centralized control of critical air assets. These early manuals emphasized that air superiority was critical to success on the battlefield and that close air support should be employed during critical phases of the ground battle and typically against objectives which ground troops could not effectively engage. Limited joint training prior to WW II, however, resulted in Army ground commanders not fully understanding these basic principles of air employment doctrine nor appreciating the complex coordination and planning required for successful joint air and ground operations. As a consequence, Army ground commanders believed that air power should be subordinated to ground forces as stated in their War Department Field Manual 31-35 and controlled and employed by the local ground commander. This disagreement between Army ground and air commanders over proper air employment doctrine resulted in the inefficient and sometimes ineffective application of air power in support of Army objectives during the initial phases of WW II.

NORTH AFRICA

Perhaps the most often cited example of difficulties involved in controlling air assets was the North Africa Campaign of 1942-1943. In North Africa, Allied air assets were initially

parcelled out under the decentralized command and control of subtheater ground commanders to support their individual operations while Axis air was effectively employed in mass.[4] The United States Army II Corps, for example, controlled the XII Air Support Command, and IX Army Corps controlled the Western Desert Air Force while the British Eighth Army and Royal Air Force (RAF) 242 Group worked together under an equal but cooperative command arrangement.

Decentralized command and control of air assets did not allow senior air commanders, who were knowledgeable of air doctrine, any opportunity to recommend options for best employing air power and, as a result, produced needless loss of aircraft when small, dispersed, locally directed air units encountered larger, concentrated, German air units. Local ground commanders failed to plan and execute offensive missions involving counter air to attain air superiority and aerial reconnaissance to determine enemy positions and strength. Rather, they employed their air assets in a more defensive troop cover role. All too frequently, Axis air simply waited until these air umbrella missions landed before German Stuka dive bombers supporting Rommel's Afrika Korps attacked American ground forces.

There was no effort on the part of ground commanders to coordinate and mass their air assets in order to attain air superiority, perform aerial reconnaissance, or attack theater critical ground targets. Instead, the II Corps and IX Corps Army Commanders independently tasked their respective air units to

provide close air support without any thought of air superiority. Consequently, the German Air Force controlled the sky and friendly air losses were so high that close air support was frequently ineffective.[2] In one particular instance, which typified this lack of coordination, Army II Corps refused a request from IX Corps for air reconnaissance of an adjacent sector because it had no responsibility or interest in that area.[3]

Concerned over the lack of air power effectiveness, General Eisenhower asked Air Marshall Tedder, RAF Commander in Chief in the Middle East, to accompany him in November of 1943 to Tunisia to evaluate the problem. Tedder found that American Army ground commanders did not understand proper use and control of aircraft nor appreciate the handicaps under which their air forces were operating. For example, ground commanders virtually ignored the need for advanced operating airfields, provisions for maintenance and spare parts in forward areas, warning services, and anti-aircraft defenses. Their independent employment of air power often stretched these limited air assets beyond the limit of providing effective support for ground forces.

Air Marshall Tedder told Eisenhower that ground commanders did not understand air doctrine and this fact directly contributed to the lack of success and heavy losses that American air power had experienced during the past few months. Local ground commanders had "frittered away fighters" in small packages in order to provide close cover for ground forces or attack "petty" targets

with no thought of attaining air superiority. As a consequence, these small, dispersed air forces were neither effective on a scale commensurate with the forces available nor able to effectively counter hostile dive bombing and strafing attacks which were frequently disrupting the American ground advance. The basic remedy, as Tedder saw it, was to centralize the control of air power under the command of airmen who were knowledgeable of air employment doctrine.[4]

Air Marshall Tedder told General Eisenhower that the successes that RAF air power had achieved during the past two years, in both Africa and the Battle of Britain, had been due in no small measure to its flexibility, which enabled it to switch from one part of the command to another and, therefore, concentrate where and when needed. Tedder regarded centralized command and control as key to this flexibility and absolutely vital.[5]

On the basis of the Air Marshall's evaluation, General Eisenhower obtained President Roosevelt's and Prime Minister Churchill's approval to reorganize the Allied Air Forces under the centralized command and control of Air Marshall Tedder and create a separate Strategic Air Force and a Tactical Air Force consisting of the XII Air Support Command, Desert Air Force, and RAF 242 Group. This newly formed Air Force organization also had direct control of supply, maintenance, and repair of its forces. The Tactical Air Force shared its headquarters with the Allied Army ground commander and assigned an air advisor to each Army

unit to direct those air forces that were allocated by the Tactical Air Force Commander.

Although the need for centralized command and control of air assets was finally realized, the new organization was not operational in time to counter Rommel's last bold push against II Corps ground forces at Kasserine Pass in February of 1943. At Kasserine Pass, Rommel's Afrika Korps caught the Americans totally by surprise. Lack of air superiority, combined with no aerial reconnaissance and ineffective defensive troop cover air operations, was the main contributor to this initial American defeat.

Had air power been more concentrated, Rommel's assault could have been prevented or effectively stopped.[6] Lack of a centralized command and control mechanism with which to mass air power during the initial days of this battle contributed to the American defeat. When the American counter offensive was finally launched, the newly formed Tactical Air Force, exercising centralized command and control, was able to mass elements of XII Air Support Command, the Desert Air Force, and the RAF 242 Group and concentrate them decisively against Rommel's tanks in the Pass. As a result, air power assaulted Rommel from five different sectors finally forcing the Afrika Korps to retreat.[7]

The advantages of the new Mediterranean Command displayed themselves clearly on 16 March 1943. Bombers of the XII Air Support Command rendezvoused for the first time with fighters of the Desert Air Force on a successful bombing mission. The

tactical fighters covered the bombers on their return home and shot down many pursuing enemy fighters. By 22 March, the newly formed Tactical Air Force was successfully attacking enemy airfields every 15 minutes.[8] As he was being pushed out of North Africa, Rommel said, after the war, that Allied Air Forces gave his troops and equipment such a pounding that they were virtually unfit for action. Air superiority allowed the Allies to secure good aerial reconnaissance, caused irretrievable damage to German supply lines, and made Rommel operate with both operational and tactical handicaps. For example, Rommel had to plan his defenses in a form least vulnerable to Allied air. His motorized and mechanized formations could no longer bear the main burden of the defensive battle because they were too susceptible to air attack. Rommel stated that air power was often a deciding factor in these last days of battle.[9]

Pushing the Axis Forces into the northeastern corner of Tunisia, the Allies launched their final offensive on 2 April with Axis resistance in North Africa finally ending on 13 April 1943.[10]

ITALY

Prior to the Allied landings in Sicily in July of 1943, the new Allied Air Force, which was now fully operational with its centralized command and control structure, attacked enemy airfields and lines of communication in order to attain air superiority and minimize enemy ground resistance. During the

initial Allied assault, the Tactical Air Force covered the beachhead and invasion fleet, attacked vital lines of communication to isolate the battle area, and bombed and strafed in advance of the ground forces as they moved inland. Finally, the Strategic Air Force conducted long range attacks against airfields and communication centers in southern Italy in preparation for the follow-on invasion of the Allied Forces onto the Italian mainland.[11]

By September of 1943, Allied bombing had pushed most of the Axis Air Force from southern to central and northern Italy, and Axis commanders were now unwilling to commit large scale air missions against Allied forces for fear of heavy air losses. The best the Germans could do was to provide limited air defense of only their most vital spots. As a result, Allied Air Forces were able to freely cover the beachheads during the early September invasion of the Italian mainland against limited enemy ground resistance.[12]

Air Marshall Tedder stated, "We began to learn a very important lesson that concentrated, precise attacks upon railway targets, scientifically selected, produced disruption and immobility of enemy supplies and troop movements."[13] For example, air assaults on Italian railway centers, rolling stock, and locomotives virtually paralyzed the Italian rail system. Destruction of railroad repair facilities and rail communications also produced high value results and proved to be the most valuable contribution in the interdiction campaign. Air Marshall

Tedder commented, "My experience in the Mediterranean convinced me of the high importance of rail communications as a target for air attack while Unity of Command gave us concentration at the right place and point in time."[14]

By October of 1943, the Germans had established a fortified defense, called the Gustav Line, approximately 30 miles south of Rome. Allied ground forces made repeated attacks against the Gustav Line during the winter months but encountered high losses with negligible results. In an effort to break the German defensive, American Air Forces began Operation Strangle in March of 1944, in order to stop the flow of German resupply along rail and roads well north of Rome. Operation Strangle consisted of simultaneous interdiction of all lines of communication leading south from the Po Valley toward Rome. The entire system of railroad bridges, yards, tunnels, and even open stretches of track was attacked.[15] Although the Air Force cut every railroad, and rail capacity fell from 80,000 tons to 4,000 tons per day, the Germans continued to hold their line of defense.

During the initial days of Operation Strangle, however, the air interdiction campaign in northern Italy was not totally coordinated with army ground commanders. The Air Force attempted to simultaneously sever all lines of communication leading south from the Po Valley while providing little forces for direct close air support of Allied ground commanders. As a result, the Allied rate of advance against the German Gustav Line was extremely slow

with German divisions taking advantage of defensive positions provided by the mountains.

By mid-April of 1944, the Air Force realized that their initial objective was unrealistic and began to more closely coordinate their air interdiction campaign with the ground commander's scheme of manuever beginning with Operation Diadem. The objective of Operation Diadem was to directly assist the land battle. Fighter bombers worked primarily against close-in targets such as command posts, guns, and troop concentrations. As a consequence, the Air Force shifted its interdiction focus to the area immediately behind the German lines in the vicinity of Rome. As a result, the Germans were unable to hold against Allied ground attacks and coordinated air interdiction immediately behind the German front lines. This combined pressure from both ground and air turned the German withdrawal into a near rout.

Operation Diadem ended on 22 June 1944 with fall of Rome.[16] During postwar interviews, German commanders said that the battlefield air interdiction (BAI) of the Gustav Line prevented them from both moving reserve forces laterally along the front and also reinforcing the front with rearward reserve units.[17]

The ultimate objective of Operations Strangle and Diadem could not be achieved until the Allied Armies had forced the Germans into real battle. In other words, air power could not by itself force the German withdrawal from the Gustav Line without ground forces forcing the Germans to expend ammunition, fuel, etc. at a

high rate. Operation Diadem once again proved that tactical air operations are most effective when air and ground forces are co-equal partners working toward a common objective.[18]

NORMANDY

General Eisenhower believed that the first five or six weeks of Operation Overlord, the Allied invasion of France, would be the most critical period for the Army. Therefore, planning needed to ensure that ground forces got ashore and stayed there. The greatest contribution that the Air Force could make, from his point of view, was to hinder German troop movement.

One plan, the Oil Plan, involved concentrated air attacks against German oil production capacity as a way to paralyze the German War Machine. The other plan, the Transportation Plan, emphasized attacking key railway centers and road networks as a way to paralyze German troop mobility. The majority of the planning staff favored the Transportation Plan because it would have a more direct and immediate impact on Operation Overlord, whereas the Oil Plan would have a more long-range effect not directly associated with the Normandy Invasion.

The final air plan adopted portions of both plans and effectively incorporated those lessons learned in North Africa and Italy. The plan consisted of three phases of activity: first, continue the strategic bombing of Germany; second, bomb targets closely linked with the invasion including railway centers, coastal defenses, harbors, and airfields; and third,

provide direct support to the invading ground forces.[19] A critical part of the plan involved air attacks on all French airfields so the Luftwaffe could not use these airfields to counter invasion. The basic idea being to inflict severe damage on all usable German air installations in France as near as possible to D-Day so that the Germans would have no time to repair these airfields prior to the invasion.

Beginning on D-Day, 6 June 1944, the Tactical Air Force attacked coastal enemy airfields and all roads leading to the beachhead in order to prevent enemy air attacks and rapid arrival of German ground reinforcements. These coordinated attacks enabled Allied air power to achieve air superiority and, as a result, the German air response was extremely limited. Adolf Galland, Luftwaffe Fighter Commander, stated after the war that most of his airfields were so bombed that he could not move substantial units to contest the invasion. As a result, German air opposition to the Normandy invasion was astonishingly slight. The Luftwaffe did not make a single daylight attack on D-Day against Allied Forces in the Channel or on the beaches.[20] Rommel stated that the Allied Air Force had complete control over the battle area and almost all day troop movement in the battle area was completely stopped.[21]

Air interdiction played a key role in Allied operational success over German forces. The campaign in Italy showed that bridge breaking was the most effective way to block the enemy's movements. In order to achieve surprise, the decision was to

delay attacks on bridges along the Seine and Loire rivers until shortly before the invasion. Last minute attacks on the Seine and Loire bridges produced maximum results.[22] As a result, air interdiction delayed and disrupted German forces reacting to the Normandy landing and provided the Allied ground forces time to build up the strength needed to hold the beach head. The air campaign had produced a state of virtual paralysis in the railway system of Northern France and Belgium. The continued air attacks on road and rail transport, combined with direct air support of the ground battle, made the difference between a precarious foothold and a swift advance.[23]

After the successful breakout at St. Lo, air interdiction was a major factor in the German Army's inability to contain the Allied penetration or conduct an orderly withdrawal. Within the Seine-Loire area, railways were almost paralyzed and armored vehicles and tanks were obliged to move by road. Many German units were delayed for lack of fuel and motor transport. All road and rail bridges between Paris and the Channel had been cut by 6 June 1944, and the German withdrawal was now hindered due to limited escape routes.

Field Marshall von Rundstedt, Commander of Western German Forces, stated after the war that Allied aircraft dive bombed and strafed every German movement on the ground, and troop movement by train became so difficult that reinforcement of the coast had to be carried out almost entirely by road.[24] However, due to interdiction of key bridges over the Seine and Loire rivers, even

road movement became extremely slow.[25] By mid-August, large numbers of German troops were enveloped and sealed off in pockets. Full air strength was applied against trapped German divisions. As a result, the Germans had lost in the Normandy Campaign the better part of a half million men.

The contributions of the Air Force to the landings in Normandy, and the subsequent defeat of the German armies could not have been so successful were it not for the intensive training program designed to enhance the mutual understanding between air and ground staffs of the principles of air support of ground operations. The Ninth Air Force conducted a series of lectures on air support operations for both air and ground commanders including their division staffs.[26]

Based on the North Africa experience, American ground and air commanders created an effective organization to enhance joint planning and execution of close air support. Two new positions, G-2 Air (Intelligence) and G-3 Air (Operations), were created in the headquarters staff to better air and ground operations. These new G-2 and G-3 air officers worked side by side with their G-2 and G-3 ground counterparts. In addition, air ground coordination parties (AGCPs), later called tactical air control parties (TACPs), were assigned to each ground unit from battalion to division. Requests for air support were sent through the AGCPs to division level. All divisions, in turn, forwarded their requests to a combined operations center which assigned air assets, in coordination with the air and ground commanders, to

meet the initial requests for air support. To further improve communications and coordination, the Army assigned ground liaison officers (GLOs) to each squadron and wing. Their responsibilities included gathering intelligence about ground operations and suggesting ways to best meet needs of ground forces. The AGCP and GLO became valuable parts of the close air support system. To further meet close air support needs, the forward air controller (FAC) concept was developed. The AGCPs acted as FACs and used identification smoke and colored panels plus VHF radios in jeeps to direct aircraft to ground targets.[27]

In July of 1944, air began to write a new chapter in the history of close air support with the development of the air-tank team involving an exchange of AGCPs and GLOs between the two arms combined with efficient VHF communications between the fighters and tanks. The system gave armor a new mobility which was in large part responsible for Patton's breakout and rapid careen across France.[28] Armored column air cover became standard procedure and produced an air-tank team that was extremely effective throughout the Allied advance across France until reaching the Siegfried Line in September of 1944. Air cover assigned to support the armored forces attacked all targets directly in front of the advancing tank columns. Targets which required additional air support strength were passed through the AGCP via VHF radio to Division level requesting that ground alert fighters scramble. As pilots approached the target area, they

contacted the AGCPs in each tank column for a briefing and to determine the position of friendly troops.[29]

The most important characteristic of the air-tank team was a solid communication network. From AGCPs and GLCs to G-2 and G-3 air officers at the headquarters, a valuable linkage was established to coordinate priorities and define commanders' intent.[30]

General Patton declared that "We could not possibly have gotten as far as we did, as fast as we did, and with as few casualties without the wonderful air support that we persistently had...the best example of the combined use of air and ground troops that I have ever witnessed."[31]

ENDNOTES

1. Arthur William Tedder, With Prejudice: The War Memoirs of Marshall of the Royal Air Force, Lord Tedder, pp. 40-43.

2. William W. Momyer, Air Power in Three Wars (WW II, Korea, Vietnam), p. 40.

3. Wesley Frank Craven and James Lea Cate, The Army Air Forces in World War II, Vol. II, p. 140.

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5. Ibid., p. 340.

6. Momyer, p. 41.

7. Craven and Cate, Vol. II, p. 154.

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14. Ibid., p. 443.503.

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22. Craven and Cate, Vol. III, p. 159.

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27. MAJ Michael L. Wolfert, From Acts To Cobra: Evolution of Close Air Support Doctrine In World War II, p. 63-68.

28. Craven and Cate, Vol. III, p. XIX.

29. Ibid., p. 243.

30. Wolfert, p. 108.

31. Craven and Cate, Vol. III, p. 272.

CHAPTER III

KOREA

The best example of the combined effects of CAS and BAI in support of ground forces during the Korean War was during the stabilization of the Allied defensive line on the Pusan peninsula during the summer of 1950. Initially, as the North Korean forces crossed the 38th parallel in June of 1950, the South Korean and U.S. Eighth Army forces retreated to the Pusan stronghold despite Fifth Air Force repeated attacks against the advancing North Korean Army. Air power, however, inflicted such high losses on North Korean personnel and equipment that the enemy lacked sufficient strength and supplies to break through the Pusan perimeter. Air power provided the Allied ground forces time to reinforce, breakout, and counter attack. By December of 1950, the combined efforts of the Eighth Army and Fifth Air Force stopped the enemy offensive and stabilized the line again around the 38th parallel.[1]

COMMAND AND CONTROL PROBLEMS

By July of 1950, the North Koreans had pushed the South Korean and Eighth Army into the vicinity of Pusan on the southeastern portion of the Korean peninsula. As the Eighth Army sought to consolidate its position and form a perimeter defense around Pusan, it needed all the help air power could provide.[2]

General Stratemeyer, Far East Air Force (FEAF) Commander, and Air Force Component Commander, under General MacArthur's United

Nations Command, requested centralized command and control of all air power in the theater including Navy and Marine air assets in order to provide responsive air support for the Pusan defense. General MacArthur, however, limited General Stratemeyer to coordination control of non-Air Force aircraft and, then, only when they were directly supporting an FEAF mission. As a result, the Navy primarily performed air interdiction in North Korea and avoided any mission associated with supporting ground forces. In addition, the Navy selected interdiction targets independently of Fifth Air Force or Eighth Army operational objectives. The Fifth Air Force, therefore, provided virtually all the close air support for the Allied ground defense.[3]

In order to enhance the effectiveness of Air Force close air support, the airborne forward air controller (FAC) concept was developed in July of 1950. The mountainous terrain in Korea seriously restricted the utility of air controllers stationed on the ground with Eighth Army units to direct air strikes. As a result, airborne FACs, called Mosquito pilots, flew in light observation aircraft over the ground forces. From the first day they flew over Korea, the Mosquito airborne forward air controllers proved their worth. Their primary duty was to control air strikes against enemy targets and provide an additional set of eyes for the ground commander. As in World War II, air liaison officers were attached to each Army Division and Corps, while Mosquito FACs were assigned to support each Infantry Regiment. The forward air controller requested immediate close

air support through his regiment headquarters to the G-3 air liaison officer at the Division level who, in turn, prioritized and sent all battalion requests through his G-3 air liaison officer counterpart at the Army Corps level to the Theater Joint Operations Center (JOC).[4]

PUSAN DEFENSE

The coordination control arrangement between the Air Force and Navy produced less than desirable results. The Navy conducted an independent and uncoordinated air interdiction campaign against communist resupply lines in North Korea while, at the same time, the FEAF concentrated primarily on front line close air support attacks in the vicinity of the Pusan defense. As a result, the North Koreans were able to reinforce and resupply their forces around the Pusan perimeter. The Eighth Army now defended against approximately 150,000 communist troops consisting of 13 rifle divisions, one tank brigade, plus a mechanized and tank division compared to four American divisions, one Marine brigade, and five Republic of Korea (ROK) divisions and no reserves.

Air Force air power, however, was able to provide a reserve force with which to counter the enemy force and prevent the North Koreans from massing their forces for a final and decisive attack. Close air support strikes had inflicted serious damage on the communist armored forces. Whenever the enemy penetrated the defenses, concentrated air attacks were able to limit the ground advance until Allied ground forces could reposition forces

from less active sectors to counter the attack. Centralized command and control of Air Force assets, however, permitted the necessary flexibility to provide massed air power when and where needed.[5]

General Stratemeyer argued that the Eighth Army situation would continue to be critical as long as North Korean forces enjoyed uninterrupted routes back to their supply sources. As a result, he recommended to General MacArthur and received approval to reallocate some air assets from close air support missions in order to concentrate on battlefield air interdiction of key enemy lines of communication. General Stratemeyer reasoned that a concentrated battlefield air interdiction campaign properly coordinated with the Navy's air interdiction campaign in North Korea would eliminate the enemy's sanctuary. The Fifth Air Force, therefore, initiated BAI directly behind the communist front lines starting in late August of 1950. For the first time, the Fifth Air Force flew more interdiction sorties than close air support missions and, by the end of August, the joint Air Force and Navy interdiction campaign in South and North Korea was a complete success with all key rail and road bridges rendered unusable and with very little hostile traffic moving south.[6]

The effectiveness of BAI in disrupting the enemy's supply system was best reflected in the progressive deterioration of North Korean supplies. By the middle of August 1950, communist combat units began to encounter serious shortages of supplies. Units deployed at the southern extremity felt the pinch first.

All units were ordered to conserve ammunition, and some combat units experienced severe petroleum shortages. The battlefield air interdiction campaign not only destroyed communist troops and equipment enroute to the battleground, but also forced the enemy to now move only by night over damaged roads. As a result, the Air Force initiated night attack sorties and, by the end of August 1950, slowed even the flow of supplies at night.[7] Captured North Koreans estimated that over one-half of the total supply tonnage destined for the front was destroyed enroute. Prisoner of war accounts verified that the communists were defeated by the relentless air action in the south rather than the Inchon amphibious landing.

On 1 September 1950, the communists unleashed five divisions against the U.S. 25th and 2nd Divisions. General Walker, Eighth Army Commander, stated that the situation was critical and requested maximum air effort to blunt the assault. After some initial resistance on the part of the Marine Corps, the FEAF was able to use Marine air power, that was being reserved for the Inchon landing later that month, for close air support missions. However, it experienced some difficulty convincing the Navy to release their air assets to support the ground defense. The Navy wanted to keep its fighters in reserve until the Inchon landing. Finally, General Stratemeyer successfully appealed to General MacArthur to release Navy fighters to assist in the close air support mission. This lack of centralized command and control of theater air assets delayed employment of Marine and Navy air

during a critical phase of the ground war and seriously jeopardized the survival of the Allied forces. Furthermore, on 4 September, the Navy independently terminated close air support operations, and General Stratemeyer again appealed to General MacArthur to direct the Navy to fulfill FEAF requests for air support.[8]

Starting in September of 1950, the communist forces attempted an all-out assault against the Pusan defenses. However, a combination of USAF, Navy, and Marine air power, under the centralized control of Fifth Air Force, was able to defeat the assault. Almost daily during 1 and 2 September, Allied air massed nearly 300 close air support sorties to counter the communist attack and thereafter, between 100 to 200 daily sorties. By 12 September, the communist forces were in retreat in face of the counter-attacking Eighth Army forces. In addition, the FEAF was now dividing its sortie allocation between close air support and battlefield air interdiction of the retreating North Korean force. General Walker stated that "No commander ever had better air support...If it had not been for the air support that we received from Fifth Air Force, we would not have been able to stay in Korea."[9]

In planning the Eighth Army breakout, General Walker counted heavily upon exploiting the shock effect of air power. On 18 and 19 September, Fifth Air Force flew nearly 300 close air support sorties. Strong ground pressure in coordination with air power started to crumble the communist defenses. By 20 September, the

Allied counter attack was able to employ tanks in a classic frontal attack, and using lessons learned during the latter portion of World War II, began to use the air-tank team concept. Mosquito FAC aircraft covered the front and flanks of the armored columns and controlled fighter aircraft to counter enemy armor opposition. On both 21 and 22 September, Mosquito FACs directed close air support sorties against remnants of the communist armored forces.[10]

With the introduction of the Marine forces into Korea, General Stratemeyer maintained that Marine air assets should come under the operational control of Fifth Air Force. The Marines, however, wanted all of their air employed in direct support of their own ground forces. General Stratemeyer aggressively opposed this arrangement and, as a result, General MacArthur directed that once Marine forces had successfully completed their Inchon amphibious landing and were integrated into Eighth Army sustained ground operations, the FEAF would assume operational control of all Marine air assets. Integration of Marine air operations with those of the FEAF gave centralized command and control of all land based air assets the same flexibility that it did in World War II. The Korean War once again demonstrated the need for a command and control structure that did not arbitrarily divide air forces between geographic sectors, but provided air power when and where these forces were needed most.[11]

COUNTER ATTACK

As the Eighth Army broke out of the Pusan perimeter, FEAF battlefield air interdiction sought to hamper the enemy's escape north toward Seoul so that the Marines in the vicinity of the Inchon landing could strengthen their foothold and then trap the North Koreans during their northern retreat. Victory in South Korea came quickly and, on 29 September, General MacArthur and President Rhee flew to Seoul for a victory parade marking the return of the Republic of Korea government to its capital city. In the end, tactical air power, in the form of CAS and BAI, played a decisive role in preventing the numerically superior North Korean force from totally overrunning South Korea and contributed significantly to the rapid drive back north to the 38th parallel.[12]

Once again for the Marine amphibious landing at Wonsan, General MacArthur compartmented Marine and Naval air units to support the landing. The operation order established the same arrangement for command of air power as with the Inchon landing. Admiral Joy, Far East Naval Forces Commander, would possess coordination control over all air operations within a fifty-mile radius of Wonsan.

On 16 October, General MacArthur directed that FEAF assume operational control over land based Marine air units and over carrier based aviation operating over Korea effective as soon as X Corps had completed its amphibious landing and advanced beyond the Wonsan objective area. The FEAF finally achieved what it had

advocated from the start of the Korean conflict: operational control of all land based air operations in Korea and true coordination control of all carrier based air operations over Korea.

In December of 1950, the FEAF exerted maximum air interdiction pressure on the enemy logistical structures and key targets supporting military forces along the battle line. The enemy supply system consisted of more than 600 miles of North Korean rail lines supporting the combined North Korean and Chinese Armies. Planners estimated that with a concentrated air interdiction campaign the enemy would only be able to fight offensively for two or three weeks before supplies became a limiting factor. If the Eighth Army could contain the attack during this critical period, attrition would compel the enemy to give up the offensive. In actuality, this war of attrition lasted another two years before a peace settlement was signed on 27 July 1953. General Weyland, FEAF Commander at this time, stated that "Although close air support contributed, the major effect upon the enemy was produced by air power applied in the rear of his front line combat zone." Battlefield air interdiction was the fundamental mission that pressured a settlement.[13]

ENDNOTES

1. William W. Momyer, Air Power in Three Wars (WW II, Korea, Vietnam), p. 168-169.

2. Robert F. Futrell, The United States Air Force In Korea 1950-1953, p. 114.

3. Momyer, p. 57-59.

4. Futrell, p. 107-108

5. Ibid., p. 137.

6. Ibid., p. 129.

7. Ibid., p. 137.

8. Ibid., p. 144.

9. Ibid., p. 146.

10. Ibid., p. 163-164.

11. Momyer, p. 62.

12. Futrell, p. 169.

13. Momyer, p. 171-172.

CHAPTER IV

VIETNAM

With the onset of the Vietnam War, the command structure for a theater air component command was fairly well established. Although the experiences of World War II and Korea had been incorporated into field training exercises, these joint training exercises normally only included the Air Force and Army units with little participation from the Marine Corps or Navy. Furthermore, when Strike Command was established as a unified command in 1961, it included neither Marine nor Navy forces. Thus, the Air Component Commander continued to only control Air Force assets. As a result, command problems similar to those that existed during World War II and Korea again appeared in Vietnam.[1]

COMMAND AND CONTROL PROBLEMS

In 1962, President Kennedy established Military Assistance Command Vietnam (MACV) as a sub-unified command under the Commander-in-Chief of the Pacific Theater (CINCPAC). At this time, many airmen advocated also establishing a single air commander to command and control all air operations involving Air Force, Navy, and Marine air assets. In actuality, however, the Second Air Division assigned to the Pacific Air Forces (PACAF) and TF-77 located in the Tonkin Gulf and assigned to the Pacific Fleet (PACFLT) operated independently during the early days of

the Vietnam conflict under a loosely worded coordination arrangement.

This arrangement between PACAF and PACFLT proved totally inadequate when the Rolling Thunder North Vietnam bombing campaign began in March of 1965. A more workable relationship was needed so the MACV Joint Target Coordinating Committee divided North Vietnam into six route packages with the Air Force attacking packages I, V, and VIA and the Navy attacking packages II, III, IV, and VIB. Dividing North Vietnam into route packages, however, compartmentalized air power and, consequently, reduced its overall capability. For example, Seventh Air Force often diverted too many sorties into route package I when weather prevented strikes in route package V or VIA. On the other hand, TF-77 often had insufficient aircraft to cover its route packages.[2]

In addition, MACV directed that Marine Corps aviation remain organic to Marine ground forces and under the control of their own Tactical Air Control System. Only when the Commander of U.S. MACV (COMUSMACV) specifically declared an emergency, would Second Air Division assume operational control. Thus, three separate tactical air forces existed in the theater: Second Air Division controlled by the Air Component Commander, TF-77 controlled by the Navy Component Commander, and Marine Corps air assets controlled by the equivalent of an Army Corps commander.

By the end of 1965, MACV set up a Tactical Air Control System to more effectively control the 500 combat aircraft that were now

in theater. At this time, PACAF redesignated Second Air Division as Seventh Air Force under the command of General Momyer who assumed operational control over all USAF assets in Southeast Asia.

In World War II and Korea, the Army corps commander normally received his air support through preplanned requests approved by the Army field commander and, therefore, had very little flexibility to divert in-flight aircraft. Recognizing the need for more flexibility in the use of close air support at the Army corps level, but also building on those lessons learned from World War II concerning centralized command and control of air assets, MACV incorporated a Direct Air Support Center (DASC), later called an Air Support Operations Center (ASOC), into the Tactical Air Control System. The DASC's function improved air support at the Army corps level by diverting, when necessary, preplanned fighter missions to support immediate requests for close air support. The DASC gave the ground corps commander the flexibility to change his target priorities as the situation dictated and to support those ground units under his command that urgently needed direct air support.[3] A separate DASC was assigned to each of the four corps in South Vietnam and interfaced with Tactical Air Control Center located at Seventh Air Force. This arrangement allowed Seventh Air Force to maintain centralized control of air assets while, at the same time, to be responsive to the needs of the Army corps commanders.

As in Korea, the terrain in Vietnam seriously restricted the utility of the ground FAC and, as a result, the airborne FAC again proved to be the most effective way to control close air support strikes. The FAC was the key element in controlling air assets in South Vietnam and acted as the local air commander for conduct of air operations. Since most targets in South Vietnam were obscured by the dense jungle, the FAC normally marked the target with a smoke rocket prior to clearing the fighters to attack. Fighter pilots relied totally on the FAC to get their eyes and bombs on target.[4]

Finally, in 1966, COMUSMACV directed that Seventh Air Force assume operational control of all Air Force and Navy tactical air assets employed both in Laos and South Vietnam excluding Marine air.[5] With centralized command and control, Seventh Air Force now had flexibility to rapidly respond to target requests throughout South Vietnam in a matter of minutes by quickly diverting fighters from I Corps, for example, to IV Corps and arrange air refueling enroute.

KHE SANH

Intelligence indicated that the enemy was looking for a decisive victory in 1969. With this plan in mind, the communists began to move their 304th and 325th Divisions into the vicinity of Khe Sanh in order to neutralize Khe Sanh on its flank as part of an all-out offensive against Dong Ha, Quang Tri, and Hue.[6]

Khe Sanh was situated in a remote portion of northwest South Vietnam near the Laotian border and was surrounded by rugged mountains and dense jungle. It was used mainly as a staging base for long-range patrols into Laos and as an intelligence gathering outpost. Due to the mountainous terrain, Khe Sanh was totally dependent on air for resupply. By the fall of 1967, enemy activity around Khe Sanh was threatening its very existence, and Khe Sanh was about to become another Dien Bien Phu. There were now two divisions of approximately 20,000 enemy troops in the Khe Sanh area.[7]

In January of 1968, the Marines reinforced Khe Sanh and, in order to provide more responsive close air support, the area surrounding Khe Sanh was divided into sectors, each supported by a separate FAC to control over 400 air strikes per day in support of the Khe Sanh defensive. Furthermore, since the enemy was expending over 1,000 rounds of mortar, rocket, and artillery fire on an almost daily basis, Seventh Air Force also increased the intensity of its air interdiction campaign against the Ho Chi Minh Trail in Laos. Between December 1967 and February 1968, Seventh Air Force employed over 20,000 sorties against lines of communication in Laos and destroyed more than 3,000 trucks.

However, controlling close air support close to the Khe Sanh perimeter initially was a problem.[8] The Marine Corps wanted to maintain control of its air-ground team and, therefore, insisted that all air power used for close air support be under their control. They initially drew a circle around Khe Sanh and

prohibited all but Marine air strikes within the circle. With the magnitude of air traffic around Khe Sanh, USAF close air support outside the circle, Marine close air support inside the circle, and transport airlift dropping supplies, this air control system was totally inadequate. As a result, General Westmoreland proposed to CINCPAC and received approval to assign Marine fighter air assets to the Seventh Air Force.[9]

On any given day during the seige, Seventh Air Force controlled about 350 fighters, 60 B-52s, 10 RF-4s, 30 FAC aircraft, and 15 C-123/C130 airlift aircraft. Without centralized command and control, a defense on this scale would have been a catastrophe. Air power was a decisive factor at Khe Sanh in defeating the enemy. Enemy casualties exceeded 10,000, and their 304th and 325th Divisions were left unfit for further combat. The enemy defeat at Khe Sanh was the turning point in North Vietnam's strategy for a full-scale ground offensive.[10]

CENTRALIZED COMMAND AND CONTROL

After Khe Sanh, Seventh Air Force continued as the single controlling agency for all air power employed in South Vietnam including Marine air assets. Now all pre-planned Marine close air support sorties were forwarded to Seventh Air Force and incorporated into the overall air battle plan. Immediate requests were still handled by the DASCs collocated at each corps headquarters including the Marine DASC.[11]

By the end of 1968, true centralized command and control of air power in South Vietnam had been achieved with incorporation of Marine air power into the system. Centralized command and control of air power provided the flexibility to support ground forces when and where it was needed in less than an hour and along a 450-mile front from I Corps to IV Corps within South Vietnam. General Abrams, COMUSMACV Commander, said that centralized control of air power allowed him to move air support anywhere he needed it and to be responsive in doing it. In testimony before Congress, General Abrams stated that "High performance fixed-wing aircraft carry a much greater payload, and you can focus that very quickly. I don't mean from 1st Brigade to 2nd Brigade. I'm talking about going anywhere. You can switch the whole faucet and do it in about 45 minutes. The whole control system and base system supports that; there is nothing in the Army like it. There is nothing in the world like it."[12]

ENDNOTES

1. William W. Momyer, Air Power in Three Wars (WW II, Korea, Vietnam), p. 65-66.

2. Ibid., p. 93-95.

3. LTC John J. Lane, Jr, Command and Control and Communications Structures in Southeast Asia, p. 260-261.

4. Momyer, p. 269-270.

5. Ibid., p. 85.

6. Bernard C. Nalty, Air Power and the Fight For Khe Sanh, p. 303.

7. Momyer, p. 306.

8. Ibid., p. 307-309.

9. Ibid., p. 309.

10. Ibid., p. 310-311.

11. Ibid., p. 317.

12. Creighton W. Abrams, Hearings Before the Committee on Armed Services, House of Representatives, on Cost Escalation in Defense Procurement Contracts and Military Posture, p. 967.

CHAPTER V

LESSONS LEARNED

The campaigns of World War II, Korea, and Vietnam produced several important lessons learned that form the basis for current air employment doctrine of the CAS and BAI missions. These lessons involve command, control, and coordination of air assets to achieve the theater commander's strategic and operational level objectives.

Centralized command and control is the most important lesson derived in North Africa. Prior to Kasserine Pass, local ground commanders inefficiently and, often, ineffectively employed air power. Once General Eisenhower centralized control of the Air Force under the command of a senior airman, Air Marshall Tedder was able to mass air power and exploit its inherent flexibility to defeat Rommel and push the Germans out of Tunisia.

Italy illustrated the importance of coordinating the air campaign with the objectives of the ground commander. Lack of coordination during the initial days of Operation Strangle wasted air sorties and jeopardized the ground forces' advance. The Air Force corrected this mistake while planning Operation Diadem. As a result, the airland team developed a battlefield air interdiction campaign that effectively supported ground maneuver and, consequently, quickly defeated and pushed the Germans out of northern Italy.

The Normandy campaign reinforced those lessons learned in North Africa and Italy. Centralized command and control and a

well coordinated close air support and battlefield air interdiction campaign allowed the Allies to quickly gain air superiority, cover the beachheads with close air support, air interdict key lines of communication to prevent German reinforcements from pushing the Allies back into the Channel, and defeat major segments of the German force by sealing off their escape routes. Continuous day and night air attack against major lines of communication supporting German coastal forces inflicted heavy losses on the enemy and prevented German reserve forces from reinforcing the front. Finally, armored air cover greatly enhanced armored mobility and produced an effective air-tank team which enabled General Patton's forces to swiftly advance across France.

The command and control issue arose again in Korea. Although Air Force assets were centrally controlled, joint air operations lacked effective command and control. Specifically, Navy and Marine air power was initially neither properly controlled nor correctly integrated into the overall air campaign plan. Even during the critical Pusan defensive in 1950, Navy and Marine component commanders were reluctant to release their air assets to provide the Eighth Army with badly needed close air support. General Stratemeyer, as Air Component Commander, had to repeatedly ask General MacArthur to pass operational control of these assets to him so he could coordinate and efficiently execute the air war in support of ground operations. On the other hand, close air support, when effectively coordinated with

the battlefield air interdiction campaign, was key to the Eighth Army breakout from the Pusan perimeter, their aggressive counter attack, and eventual stabilization of the conflict in the vicinity of the 38th parallel. In addition, the airborne FAC became a vital command and control link in properly employing CAS as the mountainous Korean terrain limited effective ground control of attack aircraft.

In Vietnam, centralized command and control again raised its ugly head. The Navy and Marine Corps initially refused to relinquish control of their air operations. In addition, COMUSMACV was hesitant to formally combine these assets under a single air component commander. Lack of centralized command and control resulted in inefficient air interdiction of North Vietnam due to compartmented route packages. Even when the survival of Khe Sanh was at stake, the Marines initially wanted to do it their way when it was obvious that their participation was minor compared to the overall air battle plan. Parochialism again overruled clear military logic. On the positive side, once air assets were properly integrated into the air component commander's battle plan, the combination of CAS and BAI in the vicinity of Khe Sanh plus the increased BAI tempo on the Ho Chi Minh Trail significantly reduced the enemy's supplies and were key factors in reducing the enemy's forces and will to continue the battle.

Of all the lessons learned during World War II, Korea, and Vietnam, the need for centralized command and control of all air

assets, regardless of whether they are Air Force, Navy, or Marine Corps, is absolutely vital to the efficient allocation and effective employment of air power. The problem, however, is that this issue has not yet been resolved. Operations in Grenada, just a few years ago, again demonstrated that Air Force and Navy employment of air assets was not jointly integrated nor properly coordinated during this crisis. The hope must be that, considering the current emphasis on jointness, each service will finally ignore parochialism and consider the ultimate strategic and operational objectives of a conflict when either assuming or passing operational control of their air assets to a single air component commander.

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