

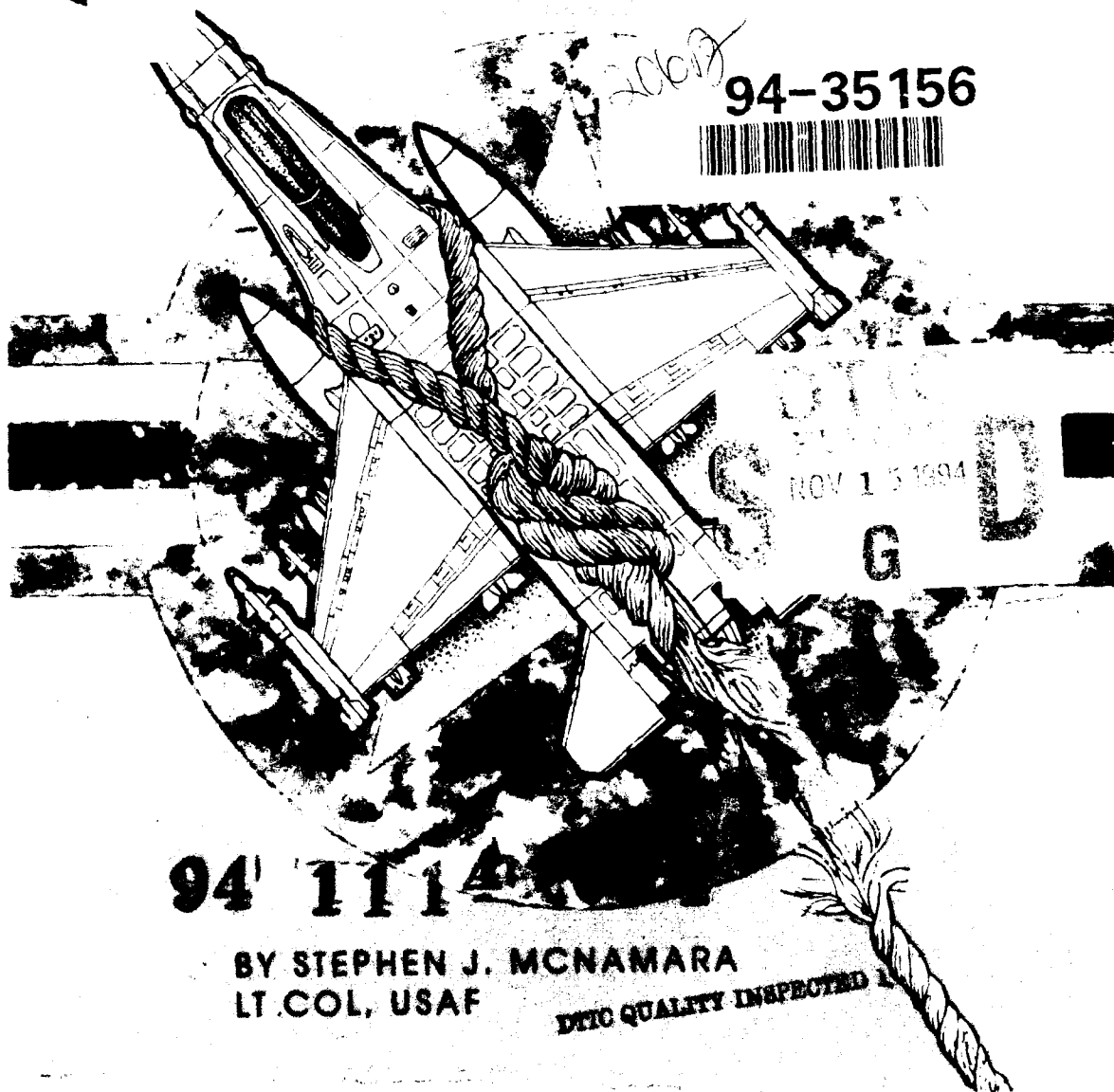
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AIR POWER'S GORDIAN KNOT CENTRALIZED VERSUS ORGANIC CONTROL

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BY STEPHEN J. MCNAMARA
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Air Power's Gordian Knot

Centralized versus Organic Control

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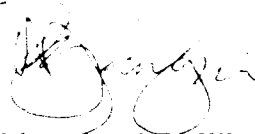
Foreword

The School of Advanced Airpower Studies (SAAS) was founded by the Air Force chief of staff in 1990 to make air strategists of selected officers already educated in air power theory, doctrine, planning, and execution. SAAS achieves this mission through a unique educational process that blends operational expertise and scholarship in an environment which fosters the creation, evolution, and refinement of ideas. This matter of creating ideas on air power is especially important because useful literature on the subject is not extensive. Airmen have seldom been accused of being thinkers, and even less frequently have they committed their thoughts to paper. Mindful of this deficiency, the SAAS curriculum requires a thesis that grapples with some important aspect of air power theory or practice and that qualifies as a contribution to knowledge. This book, based on Lt Col Steve McNamara's SAAS thesis, fulfills those objectives admirably.

Air power's unique flexibility, firepower, speed, and lethality have always made it a highly coveted asset. Land and sea commanders recognized early on that air power was essential to the successful completion of surface operations. Desirous of making air power immediately responsive to their needs, these commanders argued that air assets should be decentralized and controlled by them. Airmen, however, pointed out that air power could also carry out other operations vital to the success of the overall campaign. Moreover, even when air power complemented surface forces, its flexibility allowed it to rapidly move, mass, and strike over a very large theater. Such flexibility demanded centralized control of air assets by an airman intimately familiar with the entire campaign plan. The debate over this issue has been long and spirited, but the airman's point of view has slowly gained the upper hand, culminating in 1981 with the publication of formal doctrine calling for a joint force air component commander (JFACC) whose duties include planning, coordinating, allocating, and tasking all air assets within the joint force. The JFACC concept has continued to evolve since then and was validated by the astounding

success of air power under the leadership of Gen Charles Horner, who served as JFACC in the Gulf War. Nonetheless, questions remain over how the JFACC should ensure the most effective use of air assets, especially at the tactical level.

Colonel McNamara, a graduate of the first SAAS class, addresses the issue of the JFACC and close air support (CAS). This subject is unusually thorny because it is of such immediate concern to surface commanders. When troops are in close battle, they tend to worry less about theory and more about bombs on target; responsiveness to their immediate needs is their paramount concern. In addition, for various organizational and doctrinal reasons, airmen in the Army, Navy, and Marine Corps have devised distinctive CAS methodologies that are often quite different than those advocated by the Air Force. In other words, problems have existed—not just between air and surface officers but among airmen themselves. Steve has done an outstanding job of explaining these different perspectives and their origins, as well as the reasons for their having become entrenched over the years. *Air Power's Gordian Knot* is an important book about an important topic; all airmen should read it closely.



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About the Author



Lt Col Stephen J. McNamara

Lt Col Stephen J. McNamara was born in 1954 and raised in Indianapolis, Indiana. He graduated from the United States Air Force Academy in 1976 with a BS degree in astronautical engineering. He then completed undergraduate pilot training at Columbus Air Force Base (AFB), Mississippi, and F-4C checkout at Luke AFB, Arizona. In 1978 Lieutenant McNamara began flying the F-4D with the 4th Tactical Fighter Squadron (TFS), Hill AFB, Utah. In 1979 he transitioned to the F-4G Wild Weasel at Spangdahlem Air Base (AB), West Germany. Lured out of the cockpit in 1982, he earned an MS degree in astronautical engineering at the Air Force Institute of Technology, Wright-Patterson AFB, Ohio. After graduation, he worked as a systems analyst, engineer, and branch chief at the Air Force Weapons Laboratory, Kirtland AFB, New Mexico. During his tour, he specialized in space and tactical applications of high-energy lasers and microwave weapons. In 1987 Major McNamara transferred to the 43d TFS, Elmendorf AFB, Alaska, to fly the F-15C as flight commander and assistant operations officer. He left there for Maxwell AFB, Alabama, to attend Air Command and Staff College in 1990 and the School of Advanced Airpower Studies in 1991. Upon graduation, Colonel McNamara was assigned to the Pentagon, where he now works for the Air Force deputy chief of staff for plans and operations.

as deputy director for operational issues. Colonel McNamara is a distinguished/outstanding graduate of undergraduate pilot training, F-4 training, Squadron Officer School, Air Force Institute of Technology, and Air Command and Staff College. A senior pilot with 1,700 hours in the F-15C, F-4G, and F-4D, he holds the Meritorious Service Medal with one oak leaf cluster and the Air Force Commendation Medal. He and his wife, Vikki, were married in 1979 and have raised two sons, Eric and Ian.

Preface

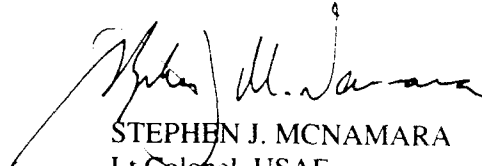
Should air power be controlled by a single commander, or should such control be split among the various services? Advocates on both sides argue that they favor unity of command. Yet, one side must be right and the other wrong—or are they both correct? *Air Power's Gordian Knot* is my attempt to answer this question.

Oftentimes, personal experience shades one's view of history, so I believe I must admit mine up front. As a fighter pilot and engineer, I have attained some expertise in aerial combat, electronic combat, and air-to-ground attack. Although I do not have the experience of a warrior dedicated to close air support (CAS)—a mission of particular importance to my topic—I did fly CAS for a year in the F-4D and know both the frustration and exhilaration of performing one of the most difficult of air power tasks.

Despite my Air Force background, I strove to be objective in exploring who should control our country's formidable air power assets. In the end, I found that much truth and parochialism are woven throughout each service's arguments for and against the centralized control of air power. Perhaps there is a logical solution to the problem, but the services feel so strongly about controlling their own air power assets that I foresee no common ground for agreement. Evidently, some "Alexander the Great" from outside the services will have to intercede and cut air power's Gordian knot.

I would like to thank several people at the School of Advanced Airpower Studies, Maxwell AFB, Alabama. They are my thesis advisor, Col Phil Meilinger, and the members of my thesis panel—Maj Jason Barlow, Maj Mark Gunzinger, and Lt Col Mike Ford. Special thanks are due my wife, Vikkii. If these pages contain any wisdom, it

is due to the persistent help of these people and their attempts to keep me on track.



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Chapter 1

Introduction

In 1986 Joint Chiefs of Staff Publication (JCS Pub) 26, *Joint Doctrine for Theater Counterair Operations (for Overseas Land Areas)*, first defined the position of joint force air component commander (JFACC).¹ Having the concept of a functional air component commander written into joint doctrine was the culmination of 43 years of effort on the part of the Air Force—but it did not occur without dissent. Following the publication of JCS Pub 26 and the supporting 1986 Omnibus Agreement, many people have selectively interpreted what the JFACC is and what he or she can do. Letters from both Headquarters US Air Force and Headquarters US Marine Corps have eloquently argued in legalistic detail for and against the authority of the JFACC.² Additionally, the Army's new concept of airland operations in Training and Doctrine Command Pamphlet (TRADOC Pam) 525-5, *AirLand Operations: A Concept for the Evolution of AirLand Battle for the Strategic Army of the 1990s and Beyond*, envisions much greater control over the "joint battle area," previously an exclusive region of JFACC direction.³ Finally, the Navy remains wary of an Air Force JFACC's ability to understand the intricacies of sea warfare and therefore releases only "excess sorties" for the JFACC's control.⁴

This study attempts to explain the historical background of each service's position on this matter, which—as we will see—is far from parochial. That is, the past experience of each service has had a hand in shaping that service's attitude. At one extreme is the Air Force's support of functional, centralized control of air power, subordinate only to the theater commander. At the other is the Marine Corps's insistence on retaining control of air power under the Marine

Air/Ground Task Force (MAGTF) commander as part of an integrated team. Perhaps an examination of the history of air power in all four services can help untie this Gordian knot that symbolizes the problem of centralized versus organic control of air power.

Accordingly, chapters 2 and 3 cover the World War II roots of each service's air power doctrine.⁵ Chapters 4 through 6 show how these doctrines were put to the test in the Korean War, the Vietnam War, and the Gulf War of 1991, respectively. Following this review of the extended debate over centralized control is the final chapter, which consolidates some "truths" from history. Before undertaking that review, however, one must understand the current concept of the JFACC.

The term *joint force air component commander* was first defined in the draft version of JCS Pub 26 as follows:

The joint force air component commander derives his authority from the joint force commander who has the authority to exercise operational control, assign missions, direct coordination among his subordinate commanders, redirect and organize his forces to ensure unity of effort in the accomplishment of his overall mission. The joint force commander will normally designate a joint force air component commander. The joint force air component commander's responsibilities will be assigned by the joint force commander (normally these would include, but not be limited to, planning, coordination, allocation and tasking based on the joint force commander's apportionment decision). Using the joint force commander's guidance and authority, and in coordination with other service component commanders . . . the joint force air component commander will recommend to the joint force commander apportionment of air sorties to various missions or geographic areas.⁶

Prior to the release of JCS Pub 26, the Marine Corps questioned whether this definition conflicted with paragraph 1A.4.3, "Special Considerations for Marine Corps TACAIR [tactical air] in Sustained Operations Ashore," in JCS Pub 12, *Tactical Command and Control Planning Guidance and Procedures for Joint Operations*, volume 4, *Joint Interface Operational Procedures (JIOP)*.⁷ As a result,

INTRODUCTION

paragraph 1A.4.3 was slightly amplified and released in both the 1986 Omnibus Agreement and the new JCS Pub 26, the new version reading as follows:

The Marine Air Ground Task Force . . . commander will retain operational control of his organic air assets. The primary mission of the MAGTF air combat element is the support of the MAGTF ground element. During joint operations, the MAGTF air assets will normally be in support of the MAGTF mission. The MAGTF commander will make sorties available to the Joint Force Commander, for tasking through his Air Component Commander, for air defense, long-range interdiction, and long-range reconnaissance. Sorties in excess of MAGTF direct support requirements will be provided to the Joint Force Commander for tasking through his Air Component Commander for the support of other components of the joint force or of the joint force as a whole.

Nothing herein shall infringe on the authority of the theater or Joint Force Commander, in the exercise of operational control, to assign missions, redirect efforts (e.g., the reapportionment and/or reallocation of any MAGTF TACAIR sorties when it has been determined by the Joint Force Commander that they are required for higher priority missions), and direct coordination among his subordinate commanders to insure unity of effort in accomplishment of his overall mission, or to maintain integrity of the force, as prescribed in JCS Pub 2, *Unified Action Armed Forces (UNAAF)*.⁸

Subsequent Marine interpretation focused on the first paragraph's description of the integrity of the MAGTF⁹ while the Air Force emphasized the second paragraph's explanation of the joint force commander's authority to redirect efforts.¹⁰ The disagreement between the two interpretations meant that there was (and still is) no de facto agreement between the Air Force and the Marines on the JFACC.

Fueling this controversy is the Army's concept of airland operations and the Navy's distrust of an air commander without sea experience, as mentioned earlier. The resultant challenge to the JFACC's legitimacy and span of control has curtailed the writing of joint doctrine that could provide the details of JFACC procedures.¹¹

Despite the recent performance of the JFACC in Operation Desert Storm, some services harbor considerable doubt over the JFACC's place in the control of air power.

Notes

1. JCS Pub 26, *Joint Doctrine for Theater Counterair Operations (for Overseas Land Areas)*, 1 April 1986, III-4.

2. Gen P. X. Kelley, commandant of the Marine Corps, to all general officers, all commanding officers, all officers in charge, White Letter no. 4-86, subject: 1986 Omnibus Agreement for Command and Control of Marine Tacair Sustained Operations Ashore, 18 March 1986; Brig Gen Thomas E. Eggers, deputy director of plans, Headquarters USAF, to distribution, letter, subject: Joint Force Air Component Commander, 5 May 1988; and Maj Gen M. P. Sullivan, deputy commander for war fighting, for commanding general, Marine Corps Combat Development Command, to distribution special, letter, subject: The Joint Force Air Component Commander and Command and Control of Marine Air/Ground Task Force, 9 March 1989.

3. TRADOC Pam 525-5, *AirLand Operations: A Concept for the Evolution of AirLand Battle for the Strategic Army of the 1990s and Beyond*, 1 August 1991, 11.

4. Maj Gen J. J. Sheenan, director for plans and policy, US Atlantic Command, to US Atlantic Command, letter, subject: Joint Force Air Component Commander, 19 February 1992, 5.

5. The history of the centralized control of US air power probably should start with Col William ("Billy") Mitchell's coordination of almost 1,500 planes in the Battle of Saint-Mihiel (France) during World War I. Air and balloon units were directly assigned to divisions and corps and flew missions very similar to those flown later by the air support commands of the 1940s. However, any service lessons from World War I were overtaken by 1930s technology and by World War II itself. Thus, World War II seems the best place to start reviewing the roots of the doctrine of centralized control.

6. This definition was first released in JCS Pub 26; later, it was incorporated in the 1987 edition of JCS Pub 1 (now Joint Pub 1-02). The current definition is identical except for the removal of the gender-specific *his*. Joint Pub 1-02, *Department of Defense Dictionary of Military and Associated Terms*, 25 March 1994, 201-2.

7. JCS Pub 12, *Tactical Command and Control Planning Guidance and Procedures for Joint Operations*, vol. 4, *Joint Interface Operational Procedures (JIOP)*, 1 August 1981, I-4.

8. This is the original text of JCS SM-142-86, *Policy for Command and Control of USMC TACAIR in Sustained Operations Ashore*, 5 March 1986. The agreement

INTRODUCTION

was first published in JCS Pub 26, III-4, 5. The only difference between paragraph 1A.4.3 of JCS Pub 12, vol. 4, and the wording in the 1986 Omnibus Agreement is the addition of the parenthetical statement following the words *redirect efforts* in the text of the Omnibus Agreement.

9. Sullivan letter, 1.

10. Eggers letter, 1.

11. See appendix E, "Service Differences of Opinion," in JCS Test Pub 3-0, *Doctrine for Unified and Joint Operations*, 11 December 1990, E-1, 2.

Chapter 2

Evolution of Indivisible Air Power in World War II

As the United States prepared for Operation Torch—landings on the Atlantic and Mediterranean coasts of North Africa (fig. 1)—and its entry into the European war, US air forces were split into an Army-controlled element and an Army Air Forces (AAF) element. However, by the end of the North African campaign, control of all air power had been centralized under an air commander. This reversal occurred in a mere four months, partly because of the failure of Army commanders to use their air power “correctly” and partly because of the influence of Great Britain on its rookie ally.¹ The result of this doctrinal reversal was the publication in 1943 of War Department Field Manual (FM) 100-20, *Command and Employment of Air Power*, which superseded Army regulations on air power and became the basis for American tactical operations in Europe for the remainder of the war.²

Although the North African campaign is an old example, it is the only one that illustrates the operation of US air forces without air superiority.³ FM 100-20, the document that emerged from that campaign experience, is the Magna Carta of American air power and the basis for today’s Air Force Manual (AFM) 1-1, *Basic Aerospace Doctrine of the United States Air Force*.⁴ To comprehend the AAF experience in North Africa is to understand the AAF’s drive for independence, the necessity for centralized control of air forces, and the preeminence of air superiority. However, FM 100-20 was not solely a product of American thought; the British had already addressed the relevant problems in detail and used their experience to influence US commanders.

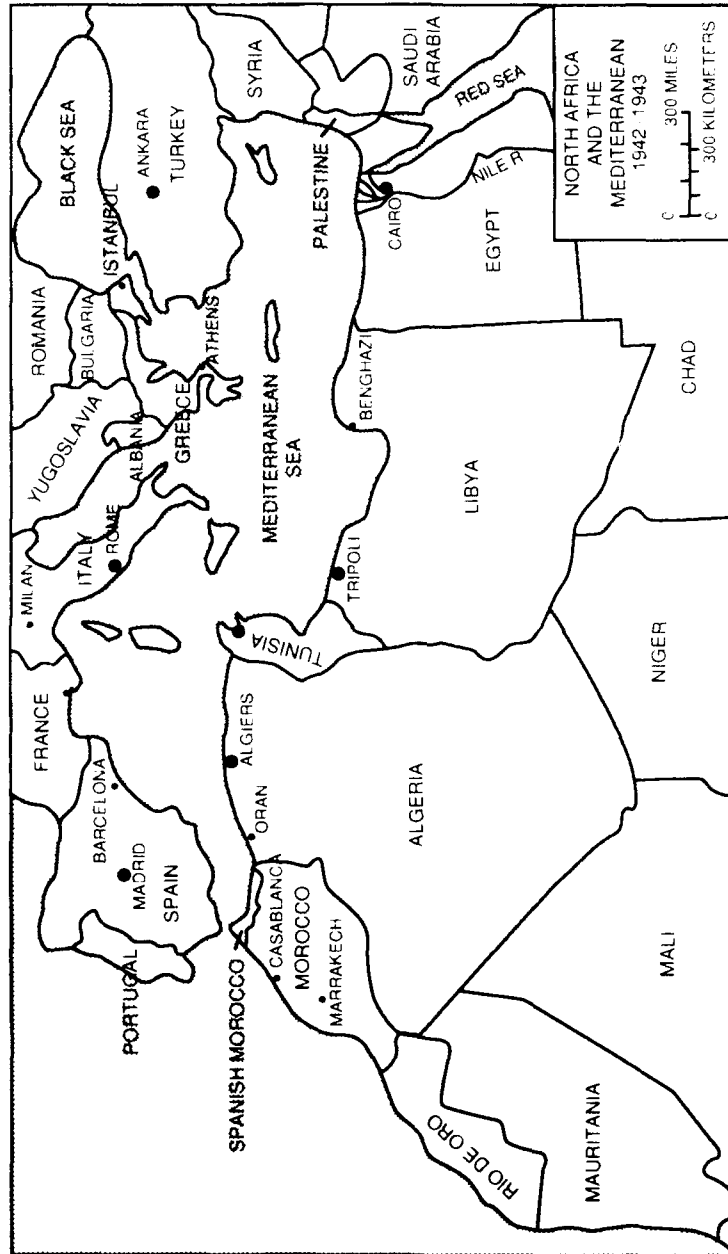


Figure 1. North Africa and the Mediterranean (From Daniel R. Mortensen, *A Pattern for Joint Operations: World War II Close Air Support—North Africa*, Historical Analysis Series, no. 93-7 [Washington, D.C.: Office of Air Force History and US Army Center of Military History, 1987], 48)

The Western Desert Campaign

The British had fought the Italians and—later—the Germans in Libya and Egypt since September 1940. As a result, the Royal Air Force (RAF) and the British army had two years of experience in combat cooperation as they fought their seesaw desert battle. By November 1942 the RAF and British army had built a model of theater air doctrine which the Americans turned to in January 1943. This spirit of cooperation was not present in the beginning, however.

Dissatisfaction with Royal Air Force Support

Several reasons account for the RAF's ineffectiveness during its initial desert battles. Defense of the homeland was the RAF's first priority as the Battle of Britain raged on, a situation which effectively deprived the small, obsolete Western Desert Air Force (WDAF) of reinforcements.⁵ Furthermore, the fact that RAF doctrine ignored ground support in favor of strategic bombing produced a doctrineless tactical air force that still searched for an adequate ground-attack aircraft.⁶ Additionally, the RAF's performance in the Battle of France earned it a black eye for poor support of the British army.⁷ For these reasons, Prime Minister Winston Churchill put tremendous pressure on the two services to work together in the desert.

In England, the RAF was dominated by Bomber Command and Fighter Command, both of which saw direct ground support of the expeditionary British army as a diversion of air power. Relenting to army pressure, the RAF created the Army Cooperation Command (ACC);⁸ nevertheless, Gen Sir Alan Brooke insisted that the ACC be controlled by the army. Because of the continued obstinacy of the RAF, Churchill supported Brooke's demand.⁹ The final straw was the failure of the British offensive to relieve Tobruk in 1941, which was attributed—at least in part—to inadequate air support.¹⁰

RAF Mends Its Ways in Egypt

Under considerable pressure to cooperate with the army and not wanting to lose part of its forces to a rival service, the RAF earnestly

set out to do better in the desert. Air Chief Marshal Sir Arthur W. Tedder brought in Air Marshal Sir Arthur Coningham to make a serious attempt to work with the army.¹¹ Drawing on his experience in World War I and his personal magnetism, Coningham set up liaisons at all levels and collocated WDAF headquarters with Eighth Army headquarters.¹² The new liaison system and Coningham's offensive use of the small WDAF in concentrated formations began to show results in early 1942. During the retreat from Tobruk, the Battle of Alam Halfa,¹³ and the breakout from El Alamein, the ground forces could see that the WDAF had a decisive effect in battle.¹⁴

Initially, however, this transformation in air-ground cooperation was one-sided. Gen Sir Claude Auchinleck, the theater commander in 1941-42, and his field commanders did not reciprocate, eventually reestablishing separate headquarters¹⁵ and failing to advise Air Marshal Coningham of ground movements.¹⁶ Only when they were relieved by theater commander Gen Sir Harold R. L. G. Alexander and Eighth Army commander Gen Sir Bernard Law Montgomery did the ground and air forces become tightly cooperative. Still, achieving this cooperation required reinforcement from General Alexander and support from Prime Minister Churchill. Alexander simply refused to referee between General Montgomery and Air Marshal Coningham, insisting they work things out as coequals.¹⁷

Air Power Lessons Learned in the Western Desert

Because of his success in the Western Desert, General Montgomery became a staunch supporter of Air Marshal Coningham's system—so much so that he published Coningham's air power lessons in a directive to his troops:

6. The greatest asset of air power is its flexibility, and this enables it to be switched quickly from one objective to another in the theatre of operations. So long as this is realized, then the whole weight of the available air power can be used in selected areas in turn; this concentrated use of the air striking force is a battle winning factor of the first importance.

7. It follows that control of the available air power must be centralized, and command must be exercised through R.A.F. channels. Nothing could be more

fatal to successful results than to dissipate the air resources into small packets placed under command of army formation commanders, with each packet working on its own plan. The soldier must not expect, or wish, to exercise direct command over air striking forces.

8. The commander of an army in the field should have an Air H.Q. with him, which will have direct control, and command, of such squadrons as may be allotted for operations in support of his army. Such air resources will be in support of his army, and not under his command. But through this Air H.Q. the army commander can obtain the support of the whole air striking force in the theatre of operations, because of the flexibility of air power.

9. Once this flexibility is destroyed, or is negatived in any way, then the successful outcome of the battle becomes endangered. And this will happen if the soldier attempts to exercise direct command over air striking forces. Such direct command, with resulting dispersion of air effort, is in fact, quite unnecessary; we have now evolved, and it exists in the Eighth Army, a system which enables the Army to obtain the fullest air support whenever and wherever necessary. All that is required is that the two staffs, army and air, should work together at the same H.Q. in complete harmony and with complete mutual understanding and confidence.¹⁸

Impact of British Experience on the Forces of Operation Torch

The British experience in the Western Desert eventually affected the forces of Operation Torch in two ways. First, Air Marshal Coningham enforced his system when he became commander of all British and American tactical air forces. Second—and almost as important—General Montgomery enthusiastically endorsed this doctrine. These factors would later outweigh any objections from the commanders of Operation Torch. For now, however, Prime Minister Churchill and the Western Desert Force knew they had found a successful solution—perhaps not the only one but at least one that worked.¹⁹

North Africa: Operation Torch

The forces of Operation Torch, both in England and those sailing from the United States, were not initially influenced by the British

experience in the Western Desert.²⁰ Consequently, they entered North Africa with their air forces divided according to the American and British doctrine described earlier.²¹ Operation Torch would test whether assigning tactical air power to army commanders could also work.

Army Air Forces Doctrine

US Army air forces were split into three components, one of which was assigned to the Army for direct support.²² Thus, an air commander controlled an air force's bomber and fighter commands, and the Army ground commander controlled the Air Support Command (ASC), which was tasked to support ground forces.²³ Despite being split, all three air forces would work together to meet theater needs.²⁴ Following this doctrine, the AAF's Twelfth Air Force was created to support American landings during Operation Torch.²⁵ However, because the landing sites were widely dispersed, XII ASC was split from Twelfth Air Force to support the Morocco landing while XII Bomber Command and XII Fighter Command landed at Oran, Algeria (fig. 2).²⁶ These commands had a cross section of aircraft to balance them with bomber and fighter forces. Further, each task force commander controlled the air forces supporting his landing. Eventually, as Fifth Army merged invasion forces in North Africa, Twelfth Air Force was also expected to merge and support the entire Fifth Army.²⁷ Unfortunately, this geographical split for amphibious invasion reinforced II Corps's belief that it owned Twelfth Air Force ASC for the duration of North African operations.²⁸

British Army and RAF Doctrine for Operation Torch

As mentioned earlier, the British army in England did not adopt the Western Desert model because that army was still adamant about controlling its air power and because the Western Desert model did not fit the American force organization.²⁹ Furthermore, the Western Desert influence did not become dominant until after the successful El Alamein breakout (on 5 November 1942), which occurred after the

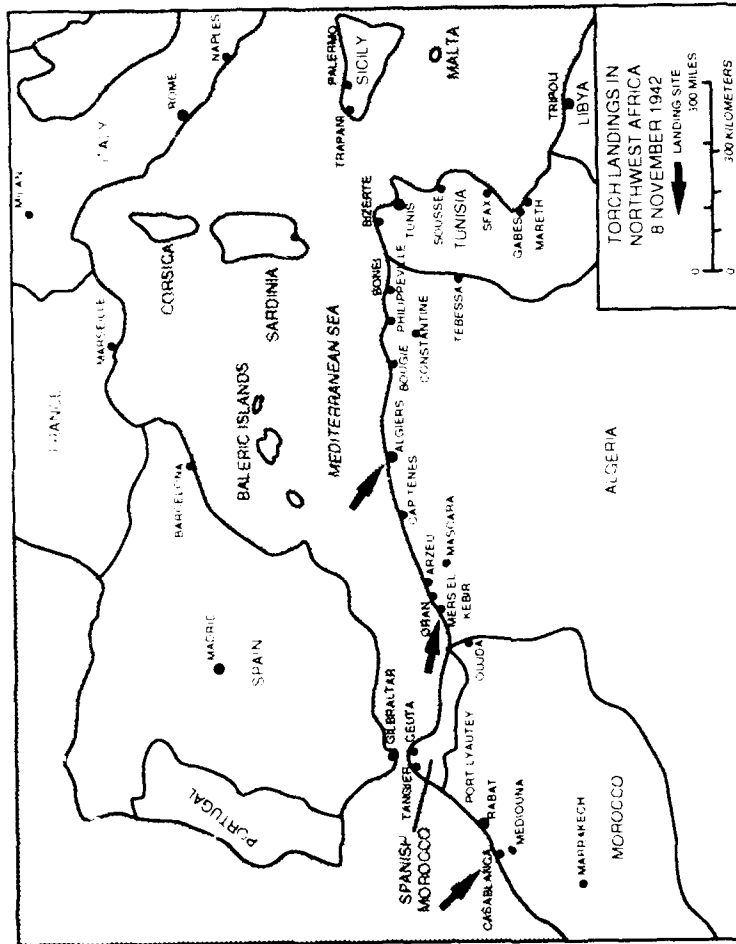


Figure 2. Torch Landings in Northwest Africa (From Daniel R. Mortensen, *A Pattern for Joint Operations: World War II Close Air Support—North Africa*, Historical Analysis Series, no. 93-7 [Washington, D.C.: Office of Air Force History and US Army Center of Military History, 1987], 54)

forces for Operation Torch were already at sea (landing on 8 November 1942). Thus—like their American counterparts—British forces in Operation Torch directly attached their Eastern Air Command to the ground commander of British First Army.³⁰

Problems in Northwest Africa

Despite the initial success of the invasion forces, they were driven back once the Germans landed fresh troops and air reinforcements in previously unoccupied Tunisia.³¹ Meanwhile, General Montgomery's Eighth Army was still pushing the Afrika Korps into headlong retreat across Libya. Performance comparisons between the American and British armies cast doubt on the ability of the Operation Torch forces, especially the Americans, to defeat the Germans. Although the main causes for the poor performance of American II Corps were green troops and commanders, stretched supply lines, and difficult terrain,³² critics also pointed to Twelfth Air Force's support of II Corps.³³

Air power in Operation Torch certainly had its share of problems. The Luftwaffe gained air superiority over Tunisia despite being outnumbered and despite having previously lost the air advantage to the British in the Western Desert campaign.³⁴ The Allied strategic bombing campaign against Tunisian ports only slowed the German troop buildup in a logistics race that the Allies lost. Furthermore, US Army commanders complained of Luftwaffe attacks on their troops and of poor AAF support, despite the fact that US air forces dedicated most of their XII ASC units to umbrella air defense and close air support (CAS).³⁵ Further, air support of French forces between the British and American armies was geographically split. Consequently, French requests for air support across this boundary were usually denied by adjacent British and American corps commanders.³⁶

Organizational problems prevented the situation from getting better. Throughout Operation Torch, Lt Gen Dwight D. Eisenhower was concerned that Spanish Morocco and Spain might drop their neutrality and side with Germany, creating a rear threat to the Allies in Tunisia. Hence, Fifth Army remained in the rear to guard against this possibility. Accordingly, Maj Gen J. H. Doolittle organized Twelfth

Air Force into multiple composite commands for each vast African district to support possible air action against both Spain and Tunisia.³⁷ Additional tasking to protect Mediterranean shipping further dispersed Twelfth Air Force, limiting its impact on the Tunisian front.³⁸

Reorganization of Mediterranean Air Command

In response to these problems and in anticipation of the Casablanca-directed theater reorganization (discussed below) in January 1943, General Eisenhower ordered the first of two reorganizations of the Allied air forces. Creation of the Allied Air Support Command (AASC) centralized the command of all tactical air power in Northwest Africa under Brig Gen Lawrence S. Kuter.³⁹ An interim fix, the creation of AASC still did not solve the problem of poor cooperation between the Army and the AAF. Service liaison at all levels was weak, with II Corps and XII ASC setting one of the worst examples by not even collocating headquarters. Furthermore, the Free French were still denied air support.⁴⁰ Despite XII ASC's new organizational independence, the II Corps commander (a three-star general) would usually intimidate the XII ASC commander (a colonel) into fulfilling II Corps requirements first.⁴¹ Yet, even with dedicated air power, CAS remained ineffective, and American troops complained of constant strafing and of Luftwaffe air superiority.⁴²

Thus, as the Germans began their delaying offensive in Tunisia,⁴³ tactical air power for Operation Torch was already under functional centralized control, at least in name.⁴⁴ It was in this climate that the battle for Kasserine Pass (14–22 February 1943) took place.⁴⁵ The top Allied commanders were still looking for a better solution.

Theater Reorganization

As the three Allied field armies squeezed the German Fifth Army and Afrika Korps into Tunisia, President Franklin D. Roosevelt and Prime Minister Churchill met in Casablanca, Morocco, on 14 January 1943 and agreed to create a combined Mediterranean command to improve coordination.⁴⁶ The resultant command organization crossed

national lines and was heavily weighted toward the battlewise British, although it granted overall command to the Americans (fig. 3). As of 18 February 1943, General Eisenhower assumed overall theater command of the British Western Desert Force as well as Operation Torch forces. Command of the Tunisian land component was tasked to General Alexander as commanding general, 18th Army Group, which consisted of three armies: British First Army (including French forces) under Lt Gen Kenneth Anderson, the US II Corps under the newly arrived Lt Gen George S. Patton, Jr., and the British Eighth Army under General Montgomery.

For the air forces, Air Marshal Tedder added control of all British and American air forces in Northwest Africa to his Mediterranean Air Command. Under him, Lt Gen Carl W. Spaatz became the commander of the Northwest African Air Forces (NAAF). Under General Spaatz, the Allies were functionally split into six organizations, with the Northwest African Strategic Air Force (NASAF) commanded by General Doolittle and the Northwest African Tactical Air Force (NATAF) commanded by Air Marshal Coningham.⁴⁷

Western Desert Doctrine Takes Hold

This reorganization completed the centralization of tactical air forces by placing the Western Desert Air Force and General Kuter's AASC under the new NATAF commander, Air Marshal Coningham.⁴⁸ Although this centralization was important, the arrival of Coningham to enforce Western Desert doctrine was the real turning point in the Tunisian air battle.⁴⁹

Air Marshal Coningham brought with him two beliefs that significantly altered NATAF's impact on the Tunisian battle. Most important was his belief in the importance of air superiority: "As a result of success in this air fighting, our land forces will be enabled to operate virtually unhindered by enemy air attack and our air forces be given increased freedom to assist in the actual battle area and in attacks against objectives in the rear."⁵⁰ This belief was a radical departure from AAF and RAF doctrine in England, where Allied air forces chose not to seek air superiority but to use strategic bombers to cause

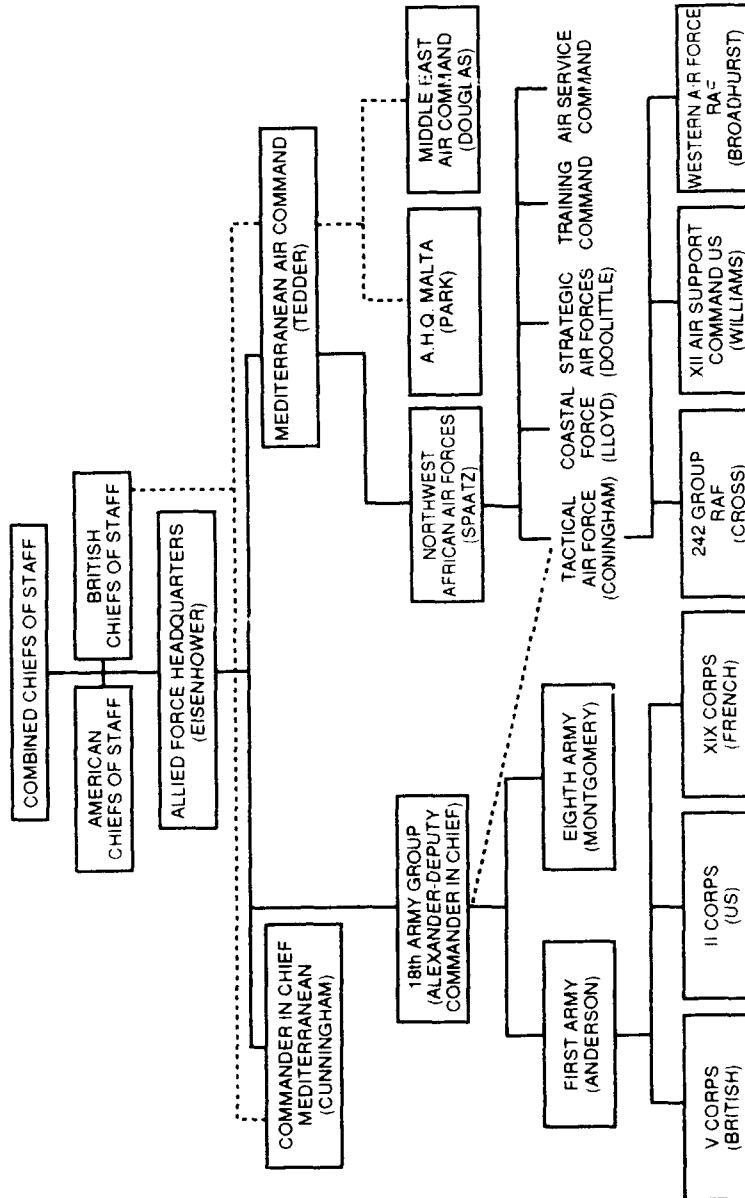


Figure 3. Allied Command and Control in the Mediterranean, February 1943 (From David Syrett, "The Tunisia Campaign, 1942-43," in *Case Studies in the Development of Close Air Support*, ed. Benjamin Franklin Cooling [Washington, D.C.: Office of Air Force History, 1990], 171)

Germany's collapse by destroying targets vital to the German economy.⁵¹ Early operations by Twelfth Air Force also attempted to bomb German ports in Tunisia without first attaining command of the air.⁵² Upon taking command of NATAF, Air Marshal Coningham immediately stopped defensive umbrella air patrols⁵³ and redirected aviation into offensive operations against Luftwaffe airfields, claiming that "an air force on the offensive automatically protected the ground forces."⁵⁴

Second, Air Marshal Coningham insisted on the use of all air forces en masse against any point in-theater. He pushed air units into temporary base transfers to mass fighter air power, improved logistics, and centrally coordinated air campaign plans with General Doolittle's NASAF.⁵⁵ Probably the most effective use of air power by Coningham was the massing of all theater air forces to support General Montgomery's breakout from the Mareth Line. Field Marshal Albert Kesselring noted that the Allies' concentrated use of theater air power was decisive.⁵⁶

Unfortunately, Air Marshal Coningham's enforcement of the British air priority system left little air power for dedicated CAS.⁵⁷ Consequently, the ground forces bitterly complained about lack of air support for the rest of the Tunisia campaign.⁵⁸ Coningham resisted pressure by army commanders and enjoyed considerable support from Alexander and Montgomery.⁵⁹ Although Anderson and Patton objected to Coningham's methods and priorities, they were stymied by Eisenhower's desire to keep peace in the alliance.⁶⁰

In essence, the old British Western Desert Force (Air Marshal Tedder, General Alexander, and Air Marshal Coningham) touted their system of centralized control as the solution to the Allies' problems in Northwest Africa. Their solution was rapidly accepted for two reasons: first, the system was successfully employed in General Montgomery's Eighth Army; second—and more importantly—antagonists had nowhere to turn. Both Prime Minister Churchill and General Eisenhower strongly supported the successful Western Desert model.

After both Air Marshal Coningham's NATAF and General Doolittle's NASAF coordinated a persistent offensive air campaign,⁶¹ the

Luftwaffe quickly lost control of Tunisia and retreated to Sicily in April 1943.⁶² Except for the landing in Salerno, the Allies never again lost local air superiority in Europe.

Field Manual 100-20

The AAF quickly capitalized on its combat experience in North Africa by publishing FM 100-20 in July 1943. Although this manual was supported by General Eisenhower, Prime Minister Churchill, and signed by Gen George C. Marshall—the US Army chief of staff—it was never coordinated through Lt Gen Lesley J. McNair and his Army Ground Forces staff back in Washington. However, debate was not necessary: "The dramatic improvement in the performance of Allied arms after 18 February had impressed the War Department more effectively than any argument."⁶³ FM 100-20 accurately reflected lessons in American and British air power from the Tunisian campaign.⁶⁴ FM 100-20 superseded all conflicting Army regulations such as FM 31-35, *Aviation in Support of Ground Forces*, 9 April 1942, which governed tactical air support. The new doctrine stood for the remainder of World War II; its statements about command and employment are as follows:

1. Relationship of Forces—Land power and air power are co-equal and interdependent forces; neither is an auxiliary of the other.
2. Doctrine of Employment—The gaining of air superiority is the first requirement for the success of any major land operation. Air forces may be properly and profitably employed against enemy sea power, land power, and air power. However, land forces operating without air superiority must take such extensive security measures against hostile air attack that 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. In this way only can destructive and demoralizing air attacks against land forces be minimized and the inherent mobility of modern land and air forces be exploited to the fullest.
3. Command of Air Power—The inherent flexibility of air power is its greatest asset. This flexibility makes it possible to employ the whole weight of the available air power against selected areas in turn; such concentrated use of

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the air striking force is a battle winning factor of the first importance. 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. The superior commander will not attach army air forces to units of the ground forces under his command except when such ground force units are operating independently or are isolated by distance or lack of communication.⁶⁵

Later, the manual explained tactical mission priority:

16. Missions—a. The mission of the tactical air force consists of three phases of operations in the following order of priority:

(1) First priority—To gain the necessary degree of air superiority. This will be accomplished by attacks against aircraft in the air and on the ground, and against those enemy installations which he requires for the application of air power.

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

(3) Third priority—To participate in a combined effort of the air and ground forces, in the battle area, to gain objectives on the immediate front of the ground forces.⁶⁶

Lessons Learned from North Africa

Three years of British and American experience in the war in North Africa led to three air power lessons: the primacy of air superiority, the need for cooperation, and the importance of centralized control. Most important was the primacy of air superiority, without which, land forces would be subjected to air bombardment and air forces could not turn to theater- and strategic-level campaigns. Forces of the Combined Bomber Offensive (CBO) in Europe were slowly learning this lesson.⁶⁷ In 1943 CBO commanders added the elimination of German fighter strength to their strategic plan as an "intermediate objective second to none in priority." Despite the semantics, this

statement acknowledged that CBO would have to achieve air superiority before it attacked "primary objectives."⁶⁸

With regard to the second lesson—the need for cooperation—FM 100-20 commented that since land power and air power were equal forces, both capable of decisively affecting the battle, neither could be an auxiliary of the other. Accordingly, an airman commanded the air forces, a soldier commanded the ground forces, and both of them worked for the theater commander. That statement, however, belies the teamwork that could emerge from such a relationship. For example, Air Marshal Coningham cultivated strong ground-air support from lower echelons and used his personal magnetism and persistence to become a trusted coequal of General Montgomery. From this position of trust, Coningham was able to convince Montgomery of the operational and strategic potential of air power. Later, as Coningham led the NATAF, he relied on the three tactical air force commanders to maintain tight liaison with their respective armies, while he concentrated on providing 18th Army Group with an efficient application of theater air power.⁶⁹

The most controversial lesson from North Africa, though, was the importance of centralized, functional control of air power, a concept that AAF elements and the Army fought over. To the US Army of World War II, which thought in terms of linear battle, attached air forces were supposed to provide air cover or to act as flying artillery in support of the Army's advance. However, theater commanders recognized the operational potential of shifting air power to meet theater or battle needs. Attached air forces could not shift to strike convoys bound for Tunisia or help General Montgomery break out of the Mareth Line. This lesson is easily forgotten because the US has never been short of air power assets in subsequent wars. As noted in following chapters, Army or Navy theater commanders have always been the ones who forced centralized control onto the theater command at a point of crisis in war.

The AAF objected to FM 100-20's apparent splitting of air power into strategic and tactical air forces.⁷⁰ Doctrinally, air staff members argued that offensive air power should not be divided. After all, the Army Air Corps had broken free of Army control by advocating an

independent strategic bombing mission to force an enemy nation to surrender as a consequence of economic collapse. Now, because the new doctrine reemphasized the ground-support role, the AAF seemed to be losing ground to old Army notions. Nevertheless, Gen Henry H. ("Hap") Arnold "wished to ensure a freedom of action for the strategic air force [and] was willing to provide the tactical air force in order to free the strategic air force from a routine requirement to support ground forces."⁷¹ In contrast to the views of Washington and London, NAAF airmen envisioned the split into two air forces as a natural functional division of heavy bombers and fighters—both of which would fight the theater and strategic battles. In a letter to General Arnold, General Spaatz wrote that "the air battle must be won first. . . . Air units must be centralized and cannot be divided into small packets among several armies or corps. . . . When the battle situation requires it, all units, including medium and heavy bombardment must support ground operations."⁷² General Kuter also seemed convinced, writing that "it is the pattern of the future . . . the way in which air power in collaboration with armies in the field will beat the enemy and win the war."⁷³ In retrospect, FM 100-20 was the beginning of the AAF drift toward a more balanced view of its role as both an independent and an auxiliary air force, depending on the strategic and theater campaigns.

In addition to the above lessons, two myths from North Africa have evolved over time. Because they muddle the discussion on air power doctrine, they need to be exposed. The first myth is that centralized control of air forces provides more efficient ground support. This is an Army/Marine Corps interpretation and is not justified by FM 100-20 or by General Montgomery's report. In actuality, centrally controlled air forces enable air power to become a decisive *strategic* or *operational* weapon. Alternately, if close air support of the immediate battle could achieve operational-level effects, then air commanders wanted to be able to concentrate all air power centrally to do so.

The second myth is that the Air Force believes it must accomplish air superiority, then interdiction, then CAS (in that order) and that strategic bombers must be dedicated to their own objectives—as if

these missions were four discrete air campaigns. That the Allies were usually able to do this in World War II because they had the advantage of overwhelming numbers helps confuse this point (discussed later). Nevertheless, both FM 100-20 and General Montgomery's notes never insinuate that each mission must be carried out sequentially to the exclusion of the other missions. They only insist that air superiority be the first priority.⁷⁴

For example, in air operations over North Africa, Air Marshal Coningham's NATAF alternated among all four missions as the ground scenario dictated: it supported ground offensives, bombed airfields, escorted NASAF bombers, and even attacked shipping when Ultra intercepts of German coded message traffic provided good targets. Likewise, General Doolittle's NASAF also switched out of its shipping-attack role to bomb airfields and support troops when the situation so dictated. In short, the evidence shows that General Spaatz's NAAF was very flexible in its interpretation of the priority of air missions.⁷⁵

Validation of FM 100-20

The Allies conducted the remainder of the Mediterranean campaign and the Normandy invasion of 1944 according to the new doctrine in FM 100-20.⁷⁶ The AAF was able to follow its new mission priority because of the sequential nature of the European campaigns.⁷⁷ However, Eighth Air Force in England quickly rebutted the notion of centralized control by a theater airman, arguing that the forces of the Combined Bomber Offensive should be centrally controlled above the theater level. Eventually, strategic air forces would break away from theater air forces to retain the priority of the CBO and remain independent of support for a land invasion.

Invasion of Sicily

While the Allied armies and NATAF were finishing off the Axis forces in Tunisia, Air Marshal Tedder's Mediterranean Air Command

was busy attacking ports, shipping, and the Luftwaffe in Sicily and Southern Italy (fig. 4).⁷⁸ The early departure of the Luftwaffe from Tunisia in mid-April 1943 released NASAF and part of NATAF to conduct an air campaign against the islands targeted for future invasion. By the time Alexander, Montgomery, and Patton landed in Sicily, the Luftwaffe there had been smashed.⁷⁹ Having gained air superiority in Sicily prior to the invasion, NASAF switched to attack-

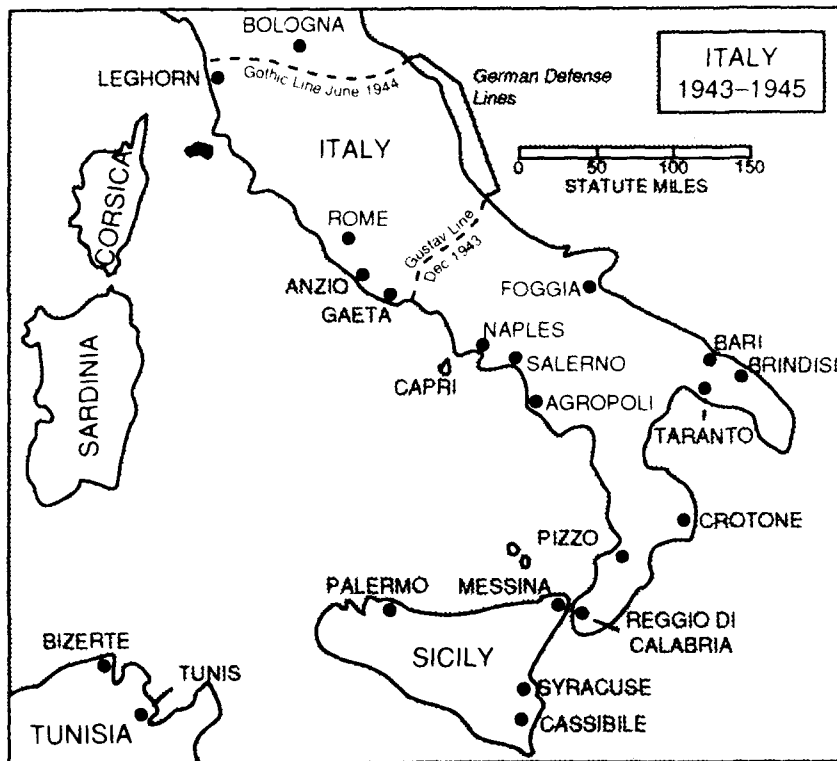


Figure 4. Italy and Sicily (From Alan F. Wilt, "Allied Cooperation in Sicily and Italy, 1943-1945," in *Case Studies in the Development of Close Air Support*, ed. Benjamin Franklin Cooling [Washington, D.C.: Office of Air Force History, 1990], 194)

ing Italian ports and airfields, while the short-range NATAF conducted interdiction and started delivering CAS after 48 hours.⁸⁰ This delay occurred because the Army had little need for CAS during the first 72 hours,⁸¹ naval gunfire being more than adequate to rout the uncommitted Italian troops defending the beachhead.⁸² This was a fortunate circumstance because the Allied air forces, making the most of their new freedom, were busy with their own agenda.⁸³ Navy and Army staffs bluntly accused NAAF of not cooperating during preinvasion planning and of overemphasizing air superiority.⁸⁴ Furthermore, CAS procedures were working poorly on the American side.⁸⁵ However, despite these problems, the campaign in Sicily was never in doubt, the Germans quickly abandoning their defense of the island.⁸⁶ Thus, AAF doctrine and Army requirements for battlefield support never collided during the Sicily operation.⁸⁷

Invasion of Italy

However, during the landing at Salerno in September 1943, the Army, NAAF, and Navy did argue over air support as the Allies were almost thrown back into the sea.⁸⁸ The landing, after an initial lull, was met by a determined German land and air effort—marking the last time that Luftflotte 2 (Second Air Fleet) was a force in Italy.⁸⁹ The Germans poured considerable air reinforcements into Italy, diverting two newly formed fighter wings south.⁹⁰ Moreover, Field Marshal Kesselring successfully concentrated German forces despite attempts by Allied air to isolate the beachhead. As a result, the Allies almost did not get off the beach. Gen Mark W. Clark, commanding general of Fifth Army, complained to Field Marshal Alexander about the lack of air support.⁹¹ Furthermore, the Luftwaffe successfully attacked the invasion fleet. General Eisenhower believed that the situation was critical;⁹² as a result, a maximum air effort was redirected to the beaches, including some heavy bombers from Eighth Air Force.⁹³ These bombers even attempted to close a rail tunnel in the Alps as part of the interdiction effort.⁹⁴ The bitter fight over heavy-bomber support turned out to be a significant lesson for General

Eisenhower, who would later insist that control of the strategic air forces be transferred to him to support the Normandy invasion.⁹⁵

In all fairness, the near disaster at Salerno can hardly be pinned totally on lack of air support for four reasons: (1) NAAF had to fly extremely long-range sorties to arrive over the beachhead, thus limiting its aircraft's time over target;⁹⁶ (2) considerable gunfire support was available from the Navy fleet;⁹⁷ (3) nevertheless, the Army disregarded the Navy's advice and chose surprise over preinvasion shore bombardment;⁹⁸ and (4) most importantly, unlike its attitude in Sicily, the Luftwaffe was taking Italy seriously.⁹⁹ Luftflotte 2 conducted strong offensive operations in Italy for the last time in its attempt to stop the Allied invasion fleet at Salerno.¹⁰⁰

These facts aside, there is no question that General Clark was unhappy with the command arrangements for the Allied air forces during the initial Italian operations.¹⁰¹ He believed that having the air commander forced on him as a coequal—according to FM 100-20—was proven wrong by the events at Salerno.¹⁰² In the Army's view, Air Marshal Tedder had not been responsive to the Army's CAS needs at Salerno¹⁰³ and had even left three beachhead operating fields unused, despite preinvasion planning to have fighters from XII ASC moved forward immediately.¹⁰⁴

Fortunately, the rapid advance of British Eighth Army from the toe and boot of Italy made the Germans' position risky, causing them to withdraw to better defensive lines. Their retreat ended the siege on the Salerno beachhead. With the Allies firmly established on the peninsula, the rest of the Italian operation was never jeopardized by Luftwaffe air activity.¹⁰⁵ With the withdrawal of the Luftwaffe air fleet, the Allies achieved air superiority. Naval gunfire was more than adequate for amphibious landings and coastal operations, and plenty of air power was available to conduct air interdiction and to support the Army inland. Thus, once again the AAF was able to carry out operations completely in accord with FM 100-20 without severely testing its air-mission priority.

Lessons from the Campaigns in Sicily and Italy

Experience with air support on the Italian front taught us that dense ground fire is lethal to aircraft. The Luftwaffe's dependence on anti-aircraft artillery (AAA) for most of its air defense¹⁰⁶ meant that, even after the Allies eliminated the Luftwaffe fighters, over 200 Allied aircraft a month were lost to ground fire.¹⁰⁷ Thus, even with air superiority, the CAS mission exacted much higher losses than had other tactical air missions. Gradually, liquid-cooled fighter-bombers like the A-36, P-38, and Spitfire were replaced by planes better able to absorb small-arms fire, such as the air-cooled P-47.¹⁰⁸ Nevertheless, air leaders were concerned that their CAS aircraft would be whittled away by attrition. They argued that fighter-bombers would be better used against more lucrative interdiction targets in a less-threatening air environment. This experience served only to reinforce the AAF's view of the third-place priority of CAS according to FM 100-20—in nonemergency situations.

Despite questions about the wisdom of extensive CAS in warfare, the AAF and Army significantly improved their CAS equipment, expertise, and procedures during the Italian campaign. Although problems with CAS occurred during the initial phase of operations in southern Italy, by the spring of 1944 "close air support in Italy came of age."¹⁰⁹ Its successful development was due in no small part to the tight coordination at the army/tactical air command level. In response to the lessons of North Africa, XII Tactical Air Command was collocated with Fifth Army during the Italian campaign.¹¹⁰ By the time of the Normandy invasion, organizational problems at this liaison level had been ironed out, and the resultant system of coordination would become the standard for Operation Overlord.¹¹¹

A final note to operations in the Mediterranean theater is the fact that they marked the last time that all theater air forces were centrally controlled at a level coequal with the ground commander.¹¹² As a result, the Italian campaign—like the one in North Africa—saw more use of heavy bombers and their fighter escorts in support of the theater campaign than would be the case later in France.

Operation Overlord and the Conquest of Europe

In June 1944 the Allies began the final invasion of France across the Normandy coast (fig. 5). The air campaign was a mirror image of those in the earlier Mediterranean invasions. Consequently, Operation Overlord was conducted according to the same priorities from FM 100-20 that General Eisenhower and Air Marshal Tedder had used in the Mediterranean.¹¹³ However, the North African lesson on the centralized control of air power was partially sacrificed to quell national rivalries and doctrinal disputes among airmen. The following discussion examines the rift that developed between strategic and tactical air forces, discusses the actual level of tactical liaison between the Army and AAF, comments on the illusion of an air force dedicated to ground support, and summarizes some additional AAF lessons from Europe that endured after the war.

Centralized Control of Air Power. In the Mediterranean, the Allies followed the British model of command and control, which consisted of an overall theater commander, together with subordinate air, sea, and land commanders. But after the US air and ground forces grew in size to equal and eventually eclipse British forces, American commanders became hesitant to accept British command.¹¹⁴ By the time of Operation Overlord, national rivalries had created rifts over the control of strategic and tactical air forces, theater strategic air doctrine, and ground forces.¹¹⁵

As rivals jockeyed for position in the proposed Mediterranean command model for Operation Overlord (fig. 6), four problems surfaced. First, Americans would not accept Field Marshal Montgomery as overall ground commander after the initial invasion. General Eisenhower, the theater commander, responded by assuming the position of ground commander himself, with Field Marshal Montgomery and Gen Omar Bradley his subordinate army group commanders. Second, because of doctrinal differences between the British and Americans over daylight precision strategic bombing,¹¹⁶ the US Eighth Air Force wanted to keep away from a command structure that allowed Sir Charles Portal, chief of the RAF Air Staff, to dictate the targets to be hit.¹¹⁷ Third, a fundamental disagreement existed over

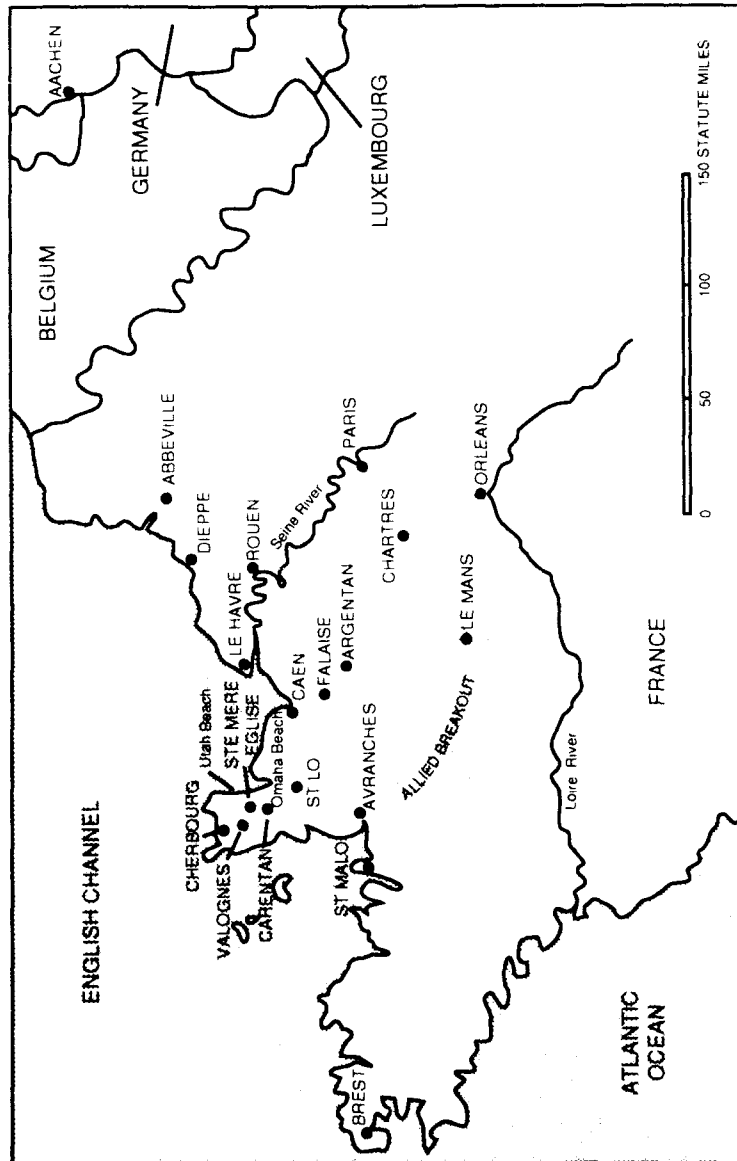
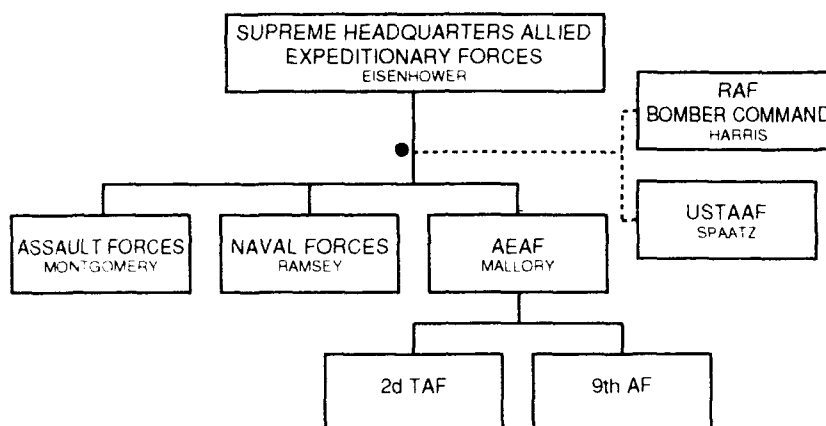


Figure 5. The European Battle Area (From W.A. Jacobs, "The Battle for France, 1944," in *Case Studies in the Development of Close Air Support*, ed. Benjamin Franklin Cooling [Washington, D.C.: Office of Air Force History, 1990], 262)

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● BOMBER FORCES UNDER OPERATIONAL CONTROL OF EISENHOWER FOR ASSAULT AND CONSOLIDATION PHASES

Figure 6. Command Structure for Operation Overlord (From William W. Momyer, *Airpower in Three Wars* [Washington, D.C.: Department of the Air Force, 1978], 49)

whether strategic bombing alone could win the war or whether a land invasion would be necessary.¹¹⁸ Both British and American strategic airmen strongly disagreed with giving control of strategic air power to General Eisenhower, who would subjugate it to the land battle.¹¹⁹ They wished to be subordinate only to the Combined Chiefs of Staff (CCS).¹²⁰ Fourth, the assignment of Air Chief Marshal Sir Trafford Leigh-Mallory as head of the Allied Expeditionary Air Force (AEAF) for overall tactical air command during the invasion was not supported by anyone except his sponsor, Sir Charles Portal.¹²¹ Eventually, his AEAF position was dissolved, and the tactical air forces in Europe were left to coordinate among themselves.¹²²

To keep the peace, CCS designated General Eisenhower as the supreme commander, with the understanding that Air Marshal Tedder would supervise Overlord air operations as deputy supreme commander. Although General Eisenhower had total control of his ground forces as overall ground commander, Air Marshal Tedder's control over the air forces was more tenuous—a far cry from his Mediterra-

nean experience. General Eisenhower was assigned only temporary authority over strategic forces for the invasion itself, subject to CCS intervention.¹²³ After the invasion, CCS withdrew this authority, although Eisenhower could call on these forces for emergencies—and often did.¹²⁴ Air Marshal Tedder was further isolated from his tactical air forces because Field Marshal Montgomery ignored the AEAFF commander, Air Marshal Leigh-Mallory at Headquarters AEAFF, preferring to deal with Air Marshal Coningham directly in Advanced Headquarters AEAFF.¹²⁵

As a result, air coordination and liaison at the theater level were poor compared to those aspects of the Mediterranean campaign. For example, in order for army commanders or tactical air force commanders to obtain heavy bomber support, they had to request coordination from Supreme Headquarters, Allied Expeditionary Forces (SHAFF—fig. 7).¹²⁶ This lack of an overall air commander led to part of the disaster at Arnhem, the Netherlands, when a rear-echelon airborne plan was not coordinated with the forward British Second Tactical Air Force, causing strangling restrictions on tactical air support.¹²⁷

Fortunately, the tight integration of tactical air forces and ground forces that developed in the Mediterranean theater still existed, because battlewise Allied leaders from North Africa and Italy now commanded the Normandy invasion. As in the Mediterranean, each tactical air command supported a specific army; however, this relationship was not permanent. Air commanders at the next level—the tactical air force/army group—routinely switched air units around to support breakthroughs, emergency air requirements, and even weather groundings. Although no overall tactical air commander existed over Ninth Air Force and British Second Tactical Air Force, these units nevertheless worked together closely.¹²⁸ Maj Gen Hoyt S. Vandenberg and Air Marshal Coningham often crossed army group boundaries in support of each other's air requirements.¹²⁹ Notably, during the Battle of the Bulge, General Vandenberg even transferred operational control of the IX and XXIX Tactical Air Commands to

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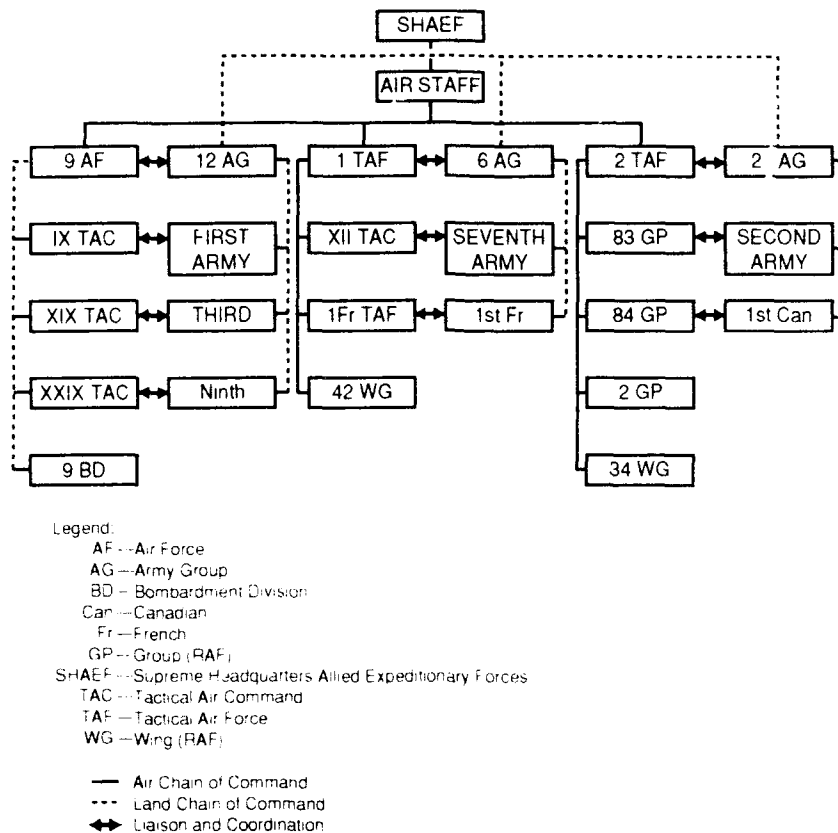


Figure 7. Air Coordination Levels in Europe (From Richard P. Hallion, *Strike from the Sky: The History of Battlefield Air Attack, 1911-1945* [Washington, D.C.: Smithsonian Institution Press, 1989], 193)

Air Marshal Coningham in light of the fact that the German advance caused shifting of army group boundaries and made British Second Tactical Air Force better suited to direct air support north of the breakthrough.¹³⁰

Despite this remarkable flexibility of the theater air organizations, the fact remains that there was neither an overall air plan nor an

overall air commander, as was the case in the Mediterranean. Instead, the strategic air forces responded to General Eisenhower's requests for support and intermittently pursued the bombing objectives of the Combined Bomber Offensive.¹³¹

Dedicated Tactical Support. The abundance of Allied air power available in Europe also created situations different from those that existed in the Mediterranean. For example, in North Africa aircraft from throughout the theater had to be gathered together to achieve decisive mass, but in Europe air units were so abundant that each Army assumed a de facto attachment of a tactical air command.¹³² This assumption led to an Army misinterpretation of air support during the Battle of France. Before D day, the Allies established air superiority over France¹³³ and successfully completed transportation interdiction, the latter due largely to the diversion of strategic bombers and their escort fighters at General Eisenhower's direction.¹³⁴ As a result, the tactical air commands could devote most of their sorties to CAS,¹³⁵ providing tank columns almost continuous air cover for the rest of the drive across France.¹³⁶ Thus, the Army believed it was now receiving the type of air support it had wanted from the start in North Africa:¹³⁷ continuous umbrella air coverage and immediate CAS on demand.¹³⁸ If a problem arose, Ninth Air Force could deliver medium bomber support and even obtain strategic heavy bombers for emergencies and preplanned ground assaults.

In reality, the Army received all the CAS it wanted because the Allies had already completed FM 100-20's high-priority missions—air superiority and battlefield isolation—by means of the initial phase of the CBO and preinvasion battlefield preparation.¹³⁹ In later decades, the organizational equivalent of a tactical air force would be called on to establish air superiority, as well as perform strategic bombing, interdiction, and CAS—all simultaneously. Therefore, when lower-priority missions received only minimal support, the Army naturally believed that the lessons of World War II had been forgotten. Actually, the same battle-tested doctrine was returning to its origins: using small air forces in emergency situations.

Air-Ground Cooperation. The doctrine of FM 100-20 proved highly successful in the tactical-level combat testing it underwent in the European campaign. However, its acceptance by the Army was predicated on two factors. First, the Allies were able to fight the air battle sequentially—from air superiority, to strategic bombing and interdiction, to CAS. As in Italy, this occurred because the ocean isolated Allied ground forces from the enemy while Allied air forces conducted the air campaign. Second, key commanders had compatible personalities and cooperated with each other. In a letter to General Arnold in September 1944, General Bradley wrote, "I cannot say too much for the very close cooperation we have had between Air and Ground. In my opinion, our close cooperation is better than the Germans ever had in their best days."¹⁴⁰ With air-ground cooperation, field commanders always were able to make do with whatever command structure they had. Alternately, if the field commanders did not cooperate, then the command structure became essential if air power were to be properly employed.

Air Component Command Structure. If General Eisenhower, Air Marshal Tedder, General Spaatz, Air Marshal Coningham, and Maj Gen Lewis Brereton had not had their common experience in the successful North African and Italian campaigns, the disjointed European air command structure might have been much more difficult to overcome.¹⁴¹ The AAF's official history noted that

fortunately, too, the gift that Eisenhower, Tedder, Spaatz, Coningham, and Vandenberg so frequently displayed for effective cooperation without reference to the legalities inherent in a defective command structure left lesser men to do the squabbling. That this squabbling imposed an unnecessary burden upon the Allied air effort seems beyond dispute, but that effective cooperation, though at substantial cost, was achieved is also indisputable.¹⁴²

Notably, the cooperation between General Vandenberg and Air Marshal Coningham is unmatched in the history of air power.

Coordination between Army and Army Air Forces. A significant lesson from our experience in Europe during World War II involves the actual level at which Army/AAF coordination occurred. As in

North Africa, the tactical air force was collocated with the army group. For Americans in Europe, this echelon was between Ninth Air Force and General Bradley's 12th Army Group.¹⁴³ Although this high level was necessary for the central control of air power, it was not adequate for timely liaison with moving field armies.¹⁴⁴ In World War II, the Army's maneuver echelon was an "army," each of which was assigned a tactical air command. In Europe, these two units became a matched and coordinated set, as was the case earlier in Italy and North Africa.¹⁴⁵ All of the praise for cooperation and excellent support grew from tactical air commands working directly with armies in the field.¹⁴⁶

The modern equivalent of this command echelon is the army/air force. As a consequence of downsizing after World War II, the Air Force eliminated the tactical air command echelon that operated under a tactical air force.¹⁴⁷ Because the firepower and capability of both Army and Air Force units have dramatically increased, the Army's field maneuver unit is now simply the "corps," to which the Air Force has developed no coequal. Instead, a current "air force" is designed to be paired with an "echelon above corps," which has become the Army's theater component level. While an "air force" may best be directed from a theater component level, it cannot effectively liaise with an Army corps—unlike the coordination in effect during World War II. Thus, the organizational levels that developed harmonious working relationships in World War II are no longer structurally synchronized.

Fighter-Bombers versus Heavy Bombers in Close Air Support.

Another issue, contentious at the time but no longer relevant with the advent of modern air weapons and their accuracy, is the effectiveness of bombers in supporting ground troops. According to one historian, "the fighter-bomber proved overwhelmingly more valuable in supporting and attacking ground forces in the battle area than did the heavy or even medium bomber."¹⁴⁸

Army histories confirm the Army's frustration with the employment of heavy bombers in proximity of troops. Although "carpet

bombing" strikes certainly created havoc and were a key factor in the breakout following the Normandy invasion (Operation Cobra), they also tore up roads and fields, preventing attacking troops from advancing.¹⁴⁹ To avoid being bombed, the troops had to give back two or three miles as they withdrew to the bomb safety line. Additionally, medium and heavy bombers were not very responsive, often requiring a lead time of 48 hours.¹⁵⁰ Finally, the Army was tired of the casualties, especially after Operation Cobra.¹⁵¹ "General Eisenhower resolved that he would never again use heavy bombers in a tactical role."¹⁵²

After the War

The lessons learned from North Africa and validated in Italy and Europe became the basis for US Air Force doctrine after World War II. Although centrally controlled army air forces also operated in conjunction with the Army, Navy, and Marine Corps in the Pacific theater, Air Force doctrine on tactical air power originated in the European theater. As one reads FM 100-20, which is based on AAF experience in Europe, the origins of the strategic and tactical doctrine in AFM 1-1 become clear. The Air Force position on centralized control, on the decisiveness of flexible and concentrated air power, and on the priority of air missions has remained unaltered since World War II. Because the Army strongly supported FM 100-20 after World War II, that document's air-ground doctrine was fully incorporated into the Army's FM 31-35, *Air-Ground Operations*, in 1946 and remained operative through the beginning of the Korean War.

Notes

1. Robert Frank Futrell, *Ideas, Concepts, Doctrine: Basic Thinking in the United States Air Force*, vol. 1, 1907-1960 (Maxwell AFB, Ala.: Air University Press, December 1989), 138.

2. Wesley Frank Craven and James Lea Cate, eds., *The Army Air Forces in World War II*, vol. 2, *Europe: Torch to Pointblank, August 1942 to December 1943* (1949; new imprint, Washington, D.C.: Office of Air Force History, 1983), 487.

3. Unfortunately, because of the current emphasis on close air support (CAS), the lessons from Northwest Africa have been used selectively. Contributors to the *Marine Corps Gazette* and the US Naval Institute *Proceedings* have alluded to the inability of centralized air forces to provide strong CAS, using North Africa as one example. John D. Cummings, "Aviation Command and Control," *Marine Corps Gazette* 73 (January 1989): 19; and "Colonel Dexter's Report," US Naval Institute *Proceedings* 116 (December 1990): 43-44.

4. AFM 1-1, *Basic Aerospace Doctrine of the United States Air Force*, vol. 2, March 1992, 122; and Futrell, 138.

5. The British refer to their Egyptian-based forces as the *Western Desert Army* as opposed to the *Middle East forces*. The former term is retained here for consistency, although it will probably cause confusion in the discussion of North Africa. The Western Desert Air Force was actually east of both Tunisia and the forces of Operation Torch in Northwest Africa.

6. W. A. Jacobs, "Air Support for the British Army, 1939-1943," *Military Affairs* 46 (December 1982): 179; and David Syrett, "The Tunisian Campaign, 1942-43," in *Case Studies in the Development of Close Air Support*, ed. Benjamin Franklin Cooling (Washington, D.C.: Office of Air Force History, 1990), 158.

7. Jacobs, 178.

8. *Ibid.*, 180; and Syrett, 158.

9. Jacobs, 179.

10. Dr Richard P. Hallion, *Strike from the Sky: The History of Battlefield Air Attack, 1911-1945* (Washington, D.C.: Smithsonian Institution Press, 1989), 154. Although the army justifiably blamed part of the problem on air support, the main causes were poor British generalship in the field and the arrival of Field Marshal Erwin Rommel.

11. Jacobs, 180.

12. Hallion, 154. Air Marshal Coningham's background made him an appropriate—though, as it turned out, radical—choice to develop new RAF doctrine. He had considerable combat experience in World War I in support of ground troops and in the Iraqi desert campaigns between the wars, and had just come from combat command of Bomber Command's 4 Group in England. Given this broad experience in both strategic and tactical uses of air forces, as well as his avoidance of professional RAF schooling, Coningham was open-minded on the best uses of air power. "He was a confirmed heretic and would become involved in bitter disputation with the more maniac devotees of the heavy bomber cult." Vincent Orange, *Coningham: A Biography of Air Marshal Sir Arthur Coningham* (London: Methuen London, 1990), 61.

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13. Syrett, 160.
14. Jacobs, 180.
15. Orange, 105.
16. For example, several times British airmen learned that they must evacuate their airfields only when the advancing Afrika Korps began shelling them.
17. Orange, 79.
18. Ibid., 134-35. The first five points introduced the paper and were followed immediately by the section on "Use of Air Power." Bernard L. Montgomery, *Some Notes on High Command in War*, Command Informational Intelligence Series, no. 43-11 (Washington, D.C.: Assistant Chief of Air Staff, Intelligence, 25 June 1943), 2.
19. Jacobs, 180.
20. Daniel R. Mortensen, *A Pattern for Joint Operations: World War II Close Air Support, North Africa*, Historical Analysis Series, CMH Pub 93-7 (Washington, D.C.: Office of Air Force History and US Army Center of Military History, 1987), 51; and Craven and Cate, 137.
21. Syrett, 159. Aside from the doctrinal issues that kept air forces attached to field armies, considerable influence was exerted by agreements to keep forces from the same country together. Thus, British air forces would support British ground forces, and American air forces would support American ground forces.
22. Mortensen, 17.
23. Albert F. Simpson, "Tactical Air Doctrine: Tunisia and Korea," *Air University Quarterly Review* 4 (Summer 1951): 6.
24. Mortensen, 52.
25. Ibid.
26. Ibid., 53.
27. Craven and Cate, 56-57.
28. Reinforcing this belief was the creation of XII Bomber Command and XII Fighter Command out of Eighth Air Force personnel and assets in England, whereas XII Air Support Command was created in the US. Additionally, for the Morocco invasion, American forces sailed from the US while the Navy transported the XII ASC; XII Bomber Command and XII Fighter Command, however, sailed and flew directly from England.
29. R. J. Overy, *The Air War, 1939-1945* (New York: Stein and Day, 1980), 68.
30. Simpson, 6.
31. Williamson Murray, *Strategy for Defeat: The Luftwaffe, 1933-1945* (Maxwell AFB, Ala.: Air University Press, January 1983), 160.
32. Craven and Cate, 143; and Syrett, 161. Twelfth Air Force paid dearly for neglecting to organize a XII Air Force Service Command until just before the invasion. The primary AAF problem in Tunisia was logistics. Airfield construction and supply severely limited Allied air forces, who were forced to fly to the limits of

their range to spend five minutes over the battlefield. In contrast, the Germans—flying from all-weather fields only minutes from the front lines—maintained a much greater presence over the battlefield than did the Allies, who actually had far more aircraft. Craven and Cate, 89.

33. Simpson, 6.

34. Albert Kesselring, *The Memoirs of Field-Marshal Kesselring*, trans. William Kimber (1953; reprint, Novato, Calif.: Presidio Press, 1989), 147.

35. Simpson, 7.

36. *Ibid.*; and Craven and Cate, 140.

37. Craven and Cate, 84.

38. Syrett, 164.

39. Simpson, 8.

40. Syrett, 167.

41. *Ibid.*, 170.

42. Simpson, 8–10.

43. Murray, 162.

44. Craven and Cate, 145.

45. Technically, Coningham assumed command midway through the battle at Kasserine. Nevertheless, most of his emphasis and reordering of priorities took more time to be effective. Syrett, 170.

46. Simpson, 8.

47. *Ibid.*, 9. NASAF was created mainly from XII Bomber Command and included a sizable fighter escort force. NATAF owned all aircraft, including medium bombers, from 242 Group, XII ASC, WDAF, and IX ASC. The Northwest African Coastal Air Force contained a large interceptor force that was responsible for protecting North African and Mediterranean shipping from air attack. Service, reconnaissance, and training commands were also present. Craven and Cate, 417.

48. NASAF's primary mission was interdiction of shipping. Craven and Cate, 150.

49. Simpson, 10.

50. Orange, 140.

51. Although much maligned for his overestimation of bombing's impact on a populace, Giulio Douhet accurately predicted the necessity of air superiority in his definition of command of the air:

To have command of the air means to be in a position to wield offensive power so great it defies human imagination. It means to be able to cut an enemy's army and navy off from their bases of operation and nullify their chances of winning the war. It means complete protection of one's own country, the efficient operation of one's army and navy, and peace of mind to live and work in safety. In short, it means to be in a position to win. *To be defeated* in the air, on the other hand, is

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finally to be defeated and to be at the mercy of the enemy, with no chance at all of defending oneself, compelled to accept whatever terms he sees fit to dictate (*italics in original*).

Air Marshal Coningham understood the enabling feature of air superiority—it had to come first. Giulio Douhet, *The Command of the Air*, trans. Dino Ferrari (1942; new imprint, Washington, D.C.: Office of Air Force History, 1983), 23.

52. Craven and Cate, 91, 108.

53. *Ibid.*, 157.

54. Simpson, 11.

55. Orange, 140. NASAF also was used to augment NATAF for specific offensives and defensive emergencies. Craven and Cate, 160.

56. Even at this stage, several ground commanders were not cooperating with their "coequal" air partners. For the final Allied push against the German pocket in Tunisia, to be led by General Anderson, Air Marshal Coningham tasked all NATAF assets to support Eastern Air Command for the British offensive. Unfortunately, General Anderson did not bother to consult the commander of Eastern Air Command prior to the offensive.

57. Hallion, 171.

58. "Colonel Dexter's Report," 44; and Craven and Cate, 175.

59. Syrett, 172, 174.

60. The meeting between Coningham and Patton as depicted in the movie *Patton* did not turn out as the movie implied. In the end, it was General Patton's chief of staff and Colonel Williams, the commander of XII ASC, who were taken on a tour of the Western Desert Air Force by General Spaatz to see how cooperation could really work. Simpson, 13. General Eisenhower chastised both General Patton and Air Marshal Coningham for their disagreement. This incident would hurt both men as they strove for command in Operation Overlord. Orange, 146–50.

61. Craven and Cate, 175–79.

62. Kesselring, 149, 155; and Simpson, 14.

63. Orange, 155.

64. Simpson, 15.

65. FM 100-20, *Command and Employment of Air Power*, 21 July 1943, 1–2. (In the original text, this section was typeset in capital letters with the same font the manual then used for chapter headings.)

66. *Ibid.*, 10–11.

67. Futrell writes that "a close reading of Air Force correspondence of the Schweinfurt-Regensburg time period reveals a confidence that although strategic bombers, employed in force, could perform their missions over Germany even without air superiority, most planners and commanders acknowledged that an early attainment of Allied control of the air was necessary if the surface invasions of Europe were to succeed" (page 154).

68. Craven and Cate, 367. The brevity of this statement should not detract from its importance to the AAF.

69. General Spaatz's NAAF and functional air forces, Air Marshal Coningham's NATAF, and General Doolittle's NASAF all coordinated at the 18th Army Group level (including the Northwest African Coastal Air Force, Air Service Command, Photographic Reconnaissance Wing, and Training Command). However, only NASAF was collocated with the NAAF. Air Marshal Coningham located NATAF with 18th Army Group's advanced headquarters. The real liaison with field armies was conducted below NATAF level: 242 Group was paired with British First Army; XII Air Support Command was paired with II Corps; and the Western Desert Air Force was paired with British Eighth Army. Craven and Cate, 163.

Although some people will dispute General Spaatz's influence over Air Marshal Coningham's activities, General Spaatz nevertheless was the first air commander to centrally control all theater air power in a campaign. Thus, one can consider General Spaatz the first joint force air component commander.

70. Ibid., 418.

71. Futrell, 137.

72. Ibid.

73. Ibid. General Kuter's support is particularly interesting since he was one of the original drafters of Air War Plans Division—Plan 1 (AWPD-1). He was an advocate of strategic bombing who also experienced theater air warfare as the NATAF deputy commander.

74. Syrett, 174.

75. Craven and Cate, 173–74.

76. Syrett, 184.

77. Hallion, 178–79.

78. Craven and Cate, 184, 189, 419, 424. These long-range forces included NASAF heavy bombers and NATAF medium bombers as well as forces in Libya not under NAAF control, such as IX Bomber Command and RAF's Middle East bombers.

79. Kesselring, 162; and Craven and Cate, 442.

80. Craven and Cate, 459, 475; Hallion, 178; and Murray, 165.

81. Craven and Cate, 462.

82. Kesselring, 163–65.

83. Samuel Eliot Morison, *History of United States Naval Operations in World War II*, vol. 9, *Sicily—Salerno—Anzio, January 1943–June 1944* (Boston: Little, Brown and Company, 1954), 223.

84. Alan F. Wilt, "Allied Cooperation in Sicily and Italy, 1943–1945," in *Case Studies in the Development of Close Air Support*, 200.

85. Ibid., 199–200.

86. Craven and Cate, 459.

87. Ibid., 484.

88. E. B. Potter, ed., *Sea Power: A Naval History*, 2d rev. ed. (Annapolis: Naval Institute Press, 1981), 278; and Morison, 250.

89. Wilt, 201.

90. Murray, 164.

91. Futrell, 177; and Wilt, 203.

92. *United States Army in World War II: The Mediterranean Theater of Operations*, vol. 3, *Salerno to Cassino* by Martin Blumenson (Washington, D.C.: Office of the Chief of Military History, Department of the Army, 1969), 120.

93. *Ibid.*, 147; and Craven and Cate, 534, 536.

94. Craven and Cate, 536.

95. Morison, 250; and Wilt, 202. General Eisenhower asked for heavy-bomber support from Eighth Air Force before the Salerno invasion but was turned down by the Combined Chiefs of Staff. Craven and Cate, 494.

96. Wilt, 202; Morison, 250–51; Blumenson, 102–3, 120; and Craven and Cate, 494. Planners had gambled that Navy escort carriers could provide the necessary air support until airfields could be occupied at Salerno. However, these airfields were not captured, and makeshift fields were within range of artillery fire and too muddy to be used during rainy weather. Thus, the gamble backfired: the Navy escort carriers had to withdraw to refuel, and NATAF had not established a ground presence in the Salerno region. Another problem was the short range of primary ground-support aircraft, such as the P-39 and P-40. Although long-range P-38s could easily reach Salerno, these fighters were part of NASAF, providing escort for the bombers. Thus, if NASAF were busy elsewhere, P-38s would not help out in the Salerno battle.

97. Potter, 278.

98. Morison, 248–49; and Potter, 278. This was not the only instance of poor Army judgement and leadership during the Salerno operation. During the operation, General Clark fired one of his corps commanders for lack of initiative and poor tactical judgement.

99. Despite the influx of Luftwaffe aircraft, the Germans' main objective throughout the Salerno battle was silencing the invasion fleet's gunfire support, not defense against shore forces. Thus, the primary threat to General Clark was German artillery—not aircraft. Blumenson, 106–7, 147.

100. *Ibid.*, 102–3. Air reinforcements from Germany were brought in briefly to try to stop the Salerno landings. They returned to Germany after the German withdrawal from Salerno, leaving Luftflotte 2 alone in its defense of Italy from Allied air attack.

101. Wilt, 203.

102. Simpson, 13.

103. Blumenson, 148.

104. *Ibid.*, 46, 120, 148.

105. Wilt, 214.

106. Kenneth P. Werrell, *Archie, Flak, AAA, and SAM: A Short Operational History of Ground-Based Air Defense* (Maxwell AFB, Ala.: Air University Press, December 1988), 24; and Futrell, 155–56.

107. Wilt, 214.

108. Futrell, 174; and Wilt, 212.

109. Wilt, 205; and Futrell, 173.

110. Wilt, 226. In 1944 the AAF redesignated its air support commands as tactical air commands to excise the word *support* and, therefore, the connotations it had for Army officers.

111. Hallion, 186. The coequal army/air support command (renamed tactical air command) level was well tested by the Western Desert British forces in North Africa. However, acceptance by American Army commanders and British commanders required more than the publication of FM 100-20. Combat experience in Italy eventually convinced nonbelievers.

112. Craven and Cate, 555–67. Even after Fifteenth Air Force was created from XII Bomber Command and the old IX Bomber Command for the purpose of participating in the Combined Bomber Offensive from North Africa and Italy, this air force was still left under the command of General Spaatz, who could divert it for emergency use in the theater. Thus, Air Marshal Tedder retained control of all theater-based air power.

In Italy the coordination level switched from NAAF/18th Army Group to Mediterranean Air Command/18th Army Group. This growth in coordination level illuminates an unaddressed problem in air-ground coordination that recurs in later wars: As the command level of centralization of air forces grows higher or increases its span of control, the liaison between lower AAF and Army echelons suffers.

113. Hallion, 190.

114. Craven and Cate, 734.

115. *Ibid.*, 307.

116. *Ibid.*, 301, 304.

117. Craven and Cate, vol. 3, *Europe: Argument to V-E Day, January 1944 to May 1945* (1951; new imprint, Washington, D.C.: Office of Air Force History, 1983), 320.

118. *United States Army in World War II: The European Theater of Operations*, vol. 2, *Cross-Channel Attack* by Gordon A. Harrison (Washington, D.C.: Office of the Chief of Military History, Department of the Army, 1951), 217–18. “General Spaatz still privately regarded POINTBLANK [the code name of the Combined Bomber Offensive] not merely as a prerequisite to OVERLORD but as a perfectly feasible alternative to it, and regretted the decision of the Combined Chiefs to risk a huge invasion when there existed a possibility of eventually bombing Germany out of the war.” Craven and Cate, vol. 3, 26.

119. Craven and Cate, vol. 3, 79–80. There was more to the doctrinal battle than is initially apparent to a modern observer. By 1944 strategic bombers were

escorted by at least an equal number of fighter escorts. Thus, almost half of the American fighter aircraft in-theater would be tied up supporting an Eighth Air Force bomber strike. (The only mission of the 15 allocated fighter groups of the VII Fighter Command in January 1944 was to escort Eighth Air Force heavy bombers.) Additionally, Ninth Air Force (the invasion tactical air force that was allocated 18 fighter groups) was also tasked to provide numerous fighter groups for bomber escort. Consequently, the decision to continue strategic bomber raids also meant that a large portion of tactical air power was not released for interdiction and other missions to prepare for the invasion. Orange, 187; and Craven and Cate, vol. 3, 11, 113, 145, 149.

120. Craven and Cate, vol. 2, 737.

121. Orange, 181; Craven and Cate, vol. 2, 738, and vol. 3, 109, 123.

122. Orange, 185, 214.

123. Harrison, 220; Craven and Cate, vol. 3, 81, 144; and W. A. Jacobs, "The Battle for France, 1944," in *Case Studies in the Development of Close Air Support*, 240. Additionally, "It was understood the requirements of supporting OVERLORD would not absorb the total effort of the strategic air forces and that the use of the balance would be arranged by Portal and Eisenhower in accordance with the existing Combined Bomber Offensive. Supervision of this part of the air operation would be exercised jointly by Portal and Eisenhower," Harrison, 220.

124. Craven and Cate, vol. 3, 212, 321. "The combined chiefs of staff reassumed control of the strategic bomber forces on 14 September 1944." Futrell, 150.

125. Orange, 187-88.

126. Jacobs, "Battle for France," 241.

127. Orange, 215-16.

128. *Ibid.*, 226.

129. *Ibid.*, 209.

130. Craven and Cate, vol. 3, 686; and Orange, 225. During the Battle of the Bulge, the strategic forces were once again called in to isolate the battlefield and destroy supporting German airfields. Craven and Cate give the combined air effort major credit for stopping the German offensive. Craven and Cate, vol. 3, 693-95.

131. Craven and Cate, vol. 2, 375; and Jacobs, "Battle for France," 242.

132. Craven and Cate, vol. 3, xviii, 243.

133. Harrison, 334-35; and *United States Army in World War II: The European Theater of Operations*, vol. 1, *The Lorraine Campaign* by Hugh Marshall Cole (Washington, D.C.: Historical Division, Department of the Army, 1950), 601.

134. Cole, 602; Craven and Cate, vol. 3, 57, 63, 138. "On 14 April General Eisenhower took over direction of the strategic air forces in support of OVERLORD and three days later issued his directive for the transportation bombing," Harrison, 223.

135. Jacobs, "Battle for France," 251.

136. Craven and Cate, vol. 3, 239; and Jacobs, "Battle for France," 271.
137. *United States Army in World War II: The European Theater of Operations*; vol. 5, *Breakout and Pursuit* by Martin Blumenson (Washington, D.C.: Office of the Chief of Military History, Department of the Army, 1961), 333-34; Jacobs, "Battle for France," 272; and Hallion, 200.
138. Jacobs, "Battle for France," 281.
139. Hallion, 194.
140. *Ibid.*, 227.
141. Craven and Cate, vol. 3, 140, 203. General Brereton was the Ninth Air Force commander until General Vandenberg replaced him after the Normandy invasion. General Brereton had worked for Air Marshal Coningham in 1942-1943 when the Ninth Air Force flew alongside the British Western Desert Air Force in Egypt and Libya.
142. *Ibid.*, 622.
143. *Ibid.*, 244.
144. Richard H. Kohn and Joseph P. Harahan, eds., *Condensed Analysis of the Ninth Air Force in the European Theater of Operations* (1946; new imprint, Washington, D.C.: Office of Air Force History, 1984), 121.
145. *Ibid.*, 68, 105.
146. Blumenson, *Breakout and Pursuit*, 334; and Cole, 598. A variation on this liaison occurred in Air Marshal Coningham's Second Tactical Air Force. Although he required his subordinate air units to stay paired with their army equivalents, he did not collocate with Field Marshal Montgomery. He believed that he needed to stay further to the rear, where adequate communications allowed him to best direct the tactical air battle. Thus (perhaps appropriately), he was the first to abandon close cooperation with the field commander so he might have better access to communications. The same dilemma still plagues us. Orange, 218.
147. During the 1946 reorganization of the AAF, a US-based Tactical Air Command was created to control all tactical air forces. This command structure, splitting strategic and tactical air forces, was created primarily to appease Army concerns over support of its ground forces. Consequently, over time, Tactical Air Command became the echelon above a tactical air force, whereas in World War II a tactical air command was an echelon under a tactical air force. Herman S. Wolk, *Planning and Organizing the Postwar Air Force: 1943-1947* (Washington, D.C.: Office of Air Force History, 1984), 128-31.
148. Hallion, 196.
149. Blumenson, *Breakout and Pursuit*, 120-21, 231; and Orange, 219.
150. Jacobs, "Battle for France," 282; and Hallion, 214.
151. Operation Cobra broke the confidence of ground forces in the precision attacks of heavy bombers in World War II. The operation had been aborted once, as a result of dozens of friendly bombing casualties but flew again the next day.

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inflicting hundreds more casualties (nearly 900 over the two days, including Lt Gen Lesley J. McNair). Later, the bombers were specifically excluded from attacking the Falaise (France) pocket. Only the Ninth Air Force and British Second Tactical Air Force were allowed to hit the evacuating Germans. Blumenson, *Breakout and Pursuit*, 231, 237. The AAF view, which tempers the basic Army criticisms, is explained in Craven and Cate, vol. 3, 230-37, 254.

152. Blumenson, *Breakout and Pursuit*, 236.

Chapter 3

Navy and Marine Experience in World War II

Both the Navy and Marine Corps maintain that air power is best controlled by commanders from the fleet or from the Marine Air/Ground Task Force. These two services believe in centralized control of air power but not in functional centralized control (i.e., MAGTF control of all Marine forces rather than JFACC control of all theater air power). Two experiences stemming from World War II had a hand in shaping the services' stance on this matter: the Navy's use of carrier aircraft during major sea battles and the Marine Corps's loss of Marine air support during its operations in the Pacific.¹

Naval Fleet Concentration

Two fundamental Navy beliefs underlie its rejection of the JFACC: the tradition of independent command at sea and the necessity of fleet concentration to overwhelm the enemy and protect the fleet. The notion of independent command of a fleet at sea predates Adm Horatio Nelson and has its origins in the fact that the sea was a natural barrier to communications during the days of sailing ships. Before the advent of radio, admirals directed fleet action based on their commander's intent, as reflected in the sailing orders. The emergence of twentieth-century technologies, however, enabled the shore-based fleet commander in chief (CINC) to control the operational movement of the fleet. Nevertheless, the Navy did not exploit this ability because breaking radio silence would have disclosed the fleet's position. Navy fleets thus remained under independent command throughout World War II. Although communication by means of space satellites now

allows a CINC to communicate with a fleet without exposing its position, the naval tradition of independent command at sea remains strong.

A more basic reason for the Navy's rejection of shore-based diffusion of sea power is the doctrine, formulated by Adm Alfred Thayer Mahan, which holds that the Navy should concentrate its forces and then seek out and decisively defeat the enemy's battle line.² By accomplishing the latter, the victor gains control of the sea and can then exploit the victory by applying a blockade or by invading. For the modern Navy, this doctrine simply means concentrating fleet aircraft carriers to achieve mass—a universal principle of war. Early in World War II, the Navy learned the importance of this principle when it discovered that unless carrier aircraft were used wisely, a fleet's striking power—even its existence—could be jeopardized. Thus, the aircraft carrier and its planes became critical theater assets, determining whether entire fleet and amphibious operations would proceed or be cancelled. Consequently, commanders would often forgo tactical gains if attaining such gains entailed exposing aircraft carriers to unnecessary risks. Four Pacific battles (fig. 8)—Coral Sea, Midway, Philippine Sea (the "Great Marianas Turkey Shoot"), and Okinawa—illustrate the principle of concentration and the importance of protecting naval air assets.

Battle of the Coral Sea

The raid on Tokyo led by Adm William F. Halsey and Gen Jimmy Doolittle was a great propaganda victory—a "hypodermic to the morale of the United States."³ Yet, one naval historian argues that this "wild goose chase"⁴ (actually, Fleet Adm Ernest J. King's idea⁵) led to heavy losses at Coral Sea because only half of the US Pacific Fleet was available to meet the Japanese invasion force.⁶ While Halsey's Task Force 16 steamed toward Japan, Adm Chester W. Nimitz, CINC of the US Pacific Fleet, learned from intelligence intercepts that the Japanese would attempt to seize Port Moresby. He immediately dispatched his two remaining carrier battle groups to stop the invasion.⁷

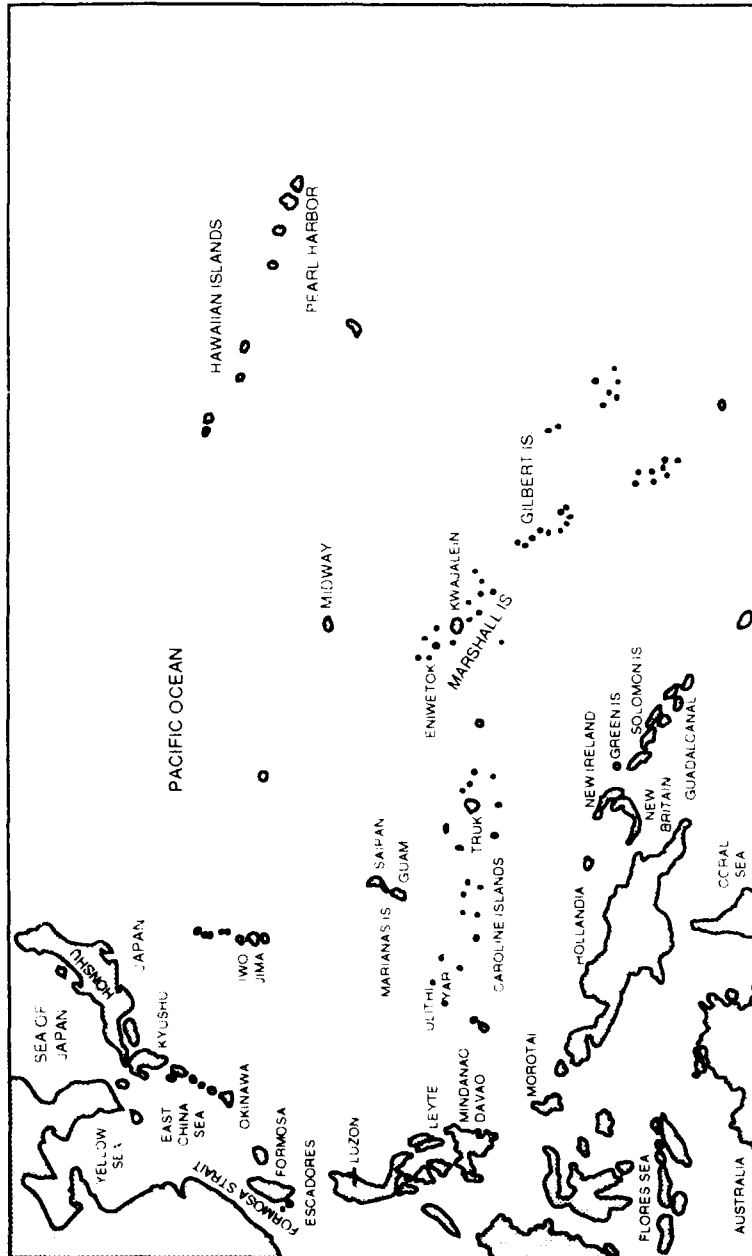


Figure 8. Pacific Theaters (From Maj Gen Haywood S. Hansell, Jr., *Strategic Air War against Japan* [Washington, D.C.: Government Printing Office, 1980], 23)

In the ensuing Battle of the Coral Sea, the SS *Lexington* and SS *Yorktown* groups engaged three Japanese carriers in the first all-carrier naval battle. Although the Navy scored a strategic victory by turning back the invasion fleet, it suffered a tactical defeat by losing the *Neosho*, *Sims*, and *Lexington*.⁸ (Only one small Japanese carrier, the *Shoho*, was sunk.) However, if Admiral Halsey's carriers had sailed with Vice Adm Frank J. Fletcher's carriers to the Coral Sea, the power of the concentrated fleet might have prevented the loss of the *Lexington* and led to a decisive victory.⁹

This battle taught the Navy that if it wished to win decisively, it must concentrate all carrier forces against the enemy fleet.¹⁰ This principle was operative throughout the rest of the naval war, especially for both of Admiral Nimitz's alternating Third and Fifth Fleet commanders, who insisted on overwhelming concentration of sea power before they would make a move. Indeed, both men were so adamant on this point that they were chastised by their superiors: Halsey for failing to split his fleet to chase the northern feint at Leyte Gulf and Adm Raymond A. Spruance for failing to pursue the Japanese fleet at Saipan.¹¹ Both admirals had elected to focus all of their task force groups on one objective and ignore the other.¹² Remarking on the overpowering force used in the earlier Tarawa invasion, Vice Adm John H. Towers noted that Admiral Spruance wanted to use "a sledgehammer to drive a tack."¹³ But employing just enough carrier air would have led to high losses; overwhelming mass, however, was decisive. This is a lesson the Navy has not forgotten.¹⁴

Battle of Midway

The next Pacific battle saw the Navy use all of its carriers, including the hastily repaired *Yorktown*. Further, because Admiral Nimitz planned the engagement to occur within range of land-based air at Midway Island (fig. 9),¹⁵ he met the dispersed Japanese invasion fleet with all of his air power concentrated.¹⁶ Not expecting to see three US carriers, Adm Isoroku Yamamoto of the Imperial Japanese Navy split off four of his carriers to cover a diversionary raid on Alaska and



Figure 9. Battle of Midway—the Approach (From E.B. Potter, ed., *Sea Power: A Naval History*, 2d ed. [Annapolis, Md.: Naval Institute Press, 1981], 297)

to protect the trailing Second Fleet.¹⁷ Thus, the Japanese entered the battle with a four-to-three carrier advantage instead of the possible eight-to-three advantage that concentrating their fleet would have given them.¹⁸

With the aid of radio intercepts, strong leadership from admirals Fletcher and Spruance, and fortuitous timing,¹⁹ the Americans sunk all four Japanese carriers, losing only one of their own. "The Japanese losses . . . were enough to reverse the course of the war."²⁰ Reflecting on the Midway battle, one historian wrote that

the Americans, given their lack of resources, had no option but to remain concentrated; it seemed inexplicable that [Yamamoto] did not concentrate also, thereby confronting his enemy with a mass of force that could not possibly be defeated.²¹

Indeed, Clark G. Reynolds comments that "seven or eight carriers concentrated under Yamamoto's command could have defeated the American navy and then supported the landing at Midway."²² Thus, the US Navy reaffirmed its conviction that superior fleet concentration remained the key to victory and continued to strive for this advantage during the remainder of the war as it sought to defeat the Japanese Imperial Fleet in a decisive battle.

First Battle of the Philippine Sea

Having relearned Admiral Maian's lesson on fleet concentration, the Navy then turned to the Japanese for a lesson on what not to do: allow one's carrier air groups to be decimated. In an attempt to support Guadalcanal and stop the Solomon campaign, the Japanese gradually stripped experienced air groups from their remaining carriers and located them on various island bases.²³ Although this transfer bolstered Japanese air support in the Solomons, it sounded the death knell of the Japanese carrier force. Trying to stop the Americans based on Henderson Field in the Solomon Islands, the "superbly trained pilots of the original carrier force" were decimated and the

survivors withdrawn to regroup.²⁴ The United States Strategic Bombing Survey concluded that "the Japanese committed in piecemeal fashion and lost all of their fully trained Navy air units, including those rescued at Midway, and a portion of their best Army air units."²⁵

Thus, the Imperial Japanese Navy lost the backbone of its fleet striking power and withdrew to Singapore to train new pilots, eventually sending a half-trained carrier force to stop the invasion of Saipan.²⁶ American airmen intercepted the Japanese air groups over the Philippine Sea during the Great Marianas Turkey Shoot, the last great fleet air battle of the Pacific war. Superior American experience and numbers proved decisive,²⁷ the Japanese losing almost 400 airplanes²⁸ to 25 for the Americans.²⁹ Its air wings destroyed, the Japanese fleet retired, losing a few carriers to attacks from aircraft and submarines from Admiral Spruance's Task Force 58. The remaining Japanese carriers would be used again only as decoys in the Battle of Leyte Gulf.

The lesson was clear: If carrier planes were diverted to ground-support missions and lost in action, then the carrier battle group would become a toothless tiger and the fleet would have to retire. The Japanese navy, unable to replace its experienced carrier pilots,³⁰ "had lost both operational freedom and striking power due to its limited carrier-based air strength."³¹ Experienced carrier pilots were a vital part of the battle group—as irreplaceable as the carrier itself—and by needlessly risking them, their planes, or the carrier, one jeopardized the entire combat capability of the battle group.

Invasion of Okinawa

A final lesson on the use of air power in World War II was the Navy's growing realization of the vulnerability of its ships to land-based aircraft. Before the war, the Army Air Service and Army Air Corps tried to convince the Navy that its ships were vulnerable to air attack, but the initial engagements at Midway and the Solomons proved otherwise. Assuming they carried adequate antiaircraft artil-

lery, maneuvering ships at sea were fairly safe. Only when ships remained stationary and close to shore to fire their guns in support of amphibious operations did land-based planes threaten them. By 1945, however, new radar proximity fuses on Navy AAA batteries made even stationary ships relatively safe from penetrating attacks.³²

Unfortunately, Japanese kamikazes burst this bubble of invulnerability. Although the Navy had experienced suicide attacks before, these early attempts paled in comparison to the endless stream of land-based kamikazes from Japan and Formosa throughout the three-month invasion.³³ Previously, destroying 90 percent of an inbound raid was considered a success, but now the damage caused by even one kamikaze could be devastating. Therefore, fleet defense would have to be perfect—complete destruction of inbound attackers.³⁴ Defense against kamikazes thus became the first priority of the fleet, even taking precedence over support of the invasion forces.³⁵ Defensive measures included the use of 16 radar picket stations (fig. 10), attacks by Okinawa-based AAF and Marine fighters, strikes by AAF B-29s, and carrier raids on airfields in Formosa and Kyushu.³⁶ Even the new Marine escort carriers were tasked primarily to support the fleet air defense mission. These measures stopped most of the kamikazes, but some invariably got through, especially at dawn and dusk.³⁷ In all, kamikazes sank 33 ships and damaged another 223, including 10 battleships and 13 carriers.³⁸

One consequence of this experience was that fleet tacticians designed an overlapping defensive coverage for the fleet and made plans for the extensive use of air assets to completely destroy an attacking force. In light of the kamikaze attacks of World War II, it is understandable that the Navy is reluctant to release its defensive air assets.

Navy Lessons for Today

These and other Pacific battles in World War II taught the Navy three lessons, all of which point toward retaining control of its air-

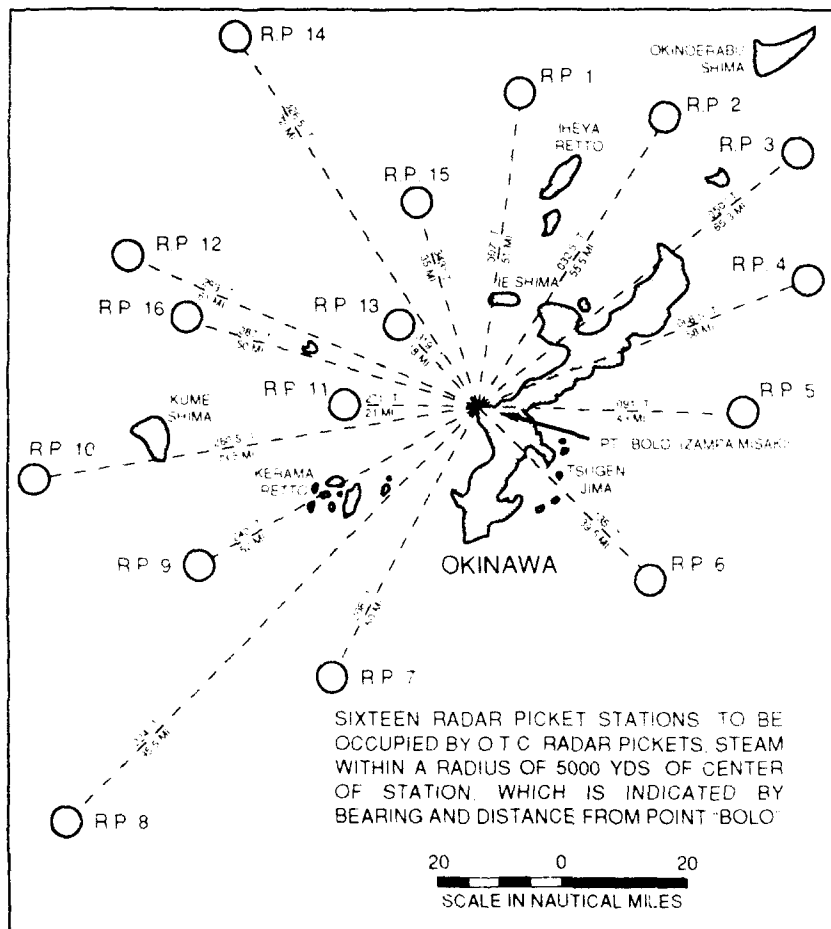


Figure 10. Okinawa Radar Pickets (From Samuel Eliot Morison, *History of United States Naval Operations in World War II*, vol. 14, *Victory in the Pacific: 1945* [Boston: Little, Brown and Company, 1960], 189)

craft. First, Coral Sea and Midway demonstrated the importance of concentrating fleet (now air power) assets to overwhelm enemy defenses and achieve decisive victory. Second, the Great Marianas

Turkey Shoot showed that a carrier's aircraft are an integral part of the battle group's striking power. If these aircraft are used piecemeal and frittered away through needless attrition, then the carrier battle group may have to retire, thereby ending its ability to project force and degrading its control of the sea. Third, the invasion of Okinawa and the raids on the Japanese mainland engendered a healthy respect for the dangers involved with operating fleets close to land.³⁹ This experience taught the Navy to use most of its fleet assets to establish overlapping defensive coverage.⁴⁰

In sum, the Navy argues that it must control its airplanes in order to concentrate them if necessary and to protect them from needless attrition. Moreover, the intricacies of sea warfare and the importance of defending the fleet from land-based air forces require that fleet air power be commanded by a naval air warfare specialist.⁴¹ Hence, it is the fleet admiral who must control and task carrier assets—not the land-based JFACC, who is not trained in naval warfare.

Marine Corps Lessons from World War II

For Marine Corps aviation, World War II was a story of triumph and frustration, the latter because of aviation's inability to support Marine ground forces in Pacific battles. Even though the lessons learned by the Marines were different from those learned by the Navy, the two services arrived at the same conclusion: control of one's own air power is a must. A review of Marine air doctrine prior to the war is helpful in understanding later events that led to this conclusion.

Marine Air before World War II

Prior to the war, the Marines had only a small air force whose primary purpose was direct support of Marine ground forces. The

Navy General Board of 1939 declared that Marine aviation was to be "equipped, organized and trained primarily for the support of the Fleet Marine Force in landing operations and in support of troop activities in the field; and secondarily as replacement squadrons for carrier-based naval aircraft."⁴²

Thus, Marine air had only short-range aircraft (fighters and dive bombers) designed for ground support and maintained no more of them than was necessary to support marines on the land. This air arm had no designs on any Army Air Corps mission and had no intention of participating in fleet actions or supporting Army land warfare. Its aircraft were stationed overseas solely to protect Marine detachments in the Pacific. Consequently, Marine air had no carriers, and its pilots were not carrier qualified, flying off carriers only during transfers to land bases defended by marines.⁴³ As we shall see, however, Marine aviators in World War II were continually frustrated in their attempts to perform the mission for which they were trained.

Guadalcanal

After having been abandoned by the Navy at Wake Island⁴⁴ at the beginning of the war, the Marines naturally had their doubts about the carrier support they had been promised for their invasion of Guadalcanal. Sure enough, losses were high in the narrow waters off the Solomon Islands, and Admiral Fletcher pulled his carriers out of range of Guadalcanal.⁴⁵ In the meantime, Marine Maj Gen Alexander A. Vandegrift had rebuilt Henderson Field on Guadalcanal and was ready for planes to land on 12 August 1942.⁴⁶ However, he was without air support until 20 August when the Navy finally delivered VMF-223 fighter squadron from SS *Long Island* to Guadalcanal.⁴⁷ On 22 August, five Army P-400 aircraft arrived, and by 24 August Henderson Field had gained 11 SBD scout bombers from the carrier *Enterprise* by way of air divert, as well as nine more P-400s.⁴⁸

Because of the continued attacks on the field, the daily Japanese reinforcement of the island by ship, and the high number of Allied air losses, the situation was becoming desperate. Although reinforcements were critically needed, they were not forthcoming. The Navy refused to base any of its carrier planes at Henderson Field or to move its carriers into the submarine-infested waters.⁴⁹ Further, Gen Douglas MacArthur found that basing medium or heavy bombers on the island was a logistical impossibility because the Navy had given airfield construction a low priority.⁵⁰ The only AAF planes available to handle the mud at Henderson were the antiquated P-400s. The sense of desperation continued until "carrier planes and pilots who otherwise would have been unemployed . . . pour[ed] into Henderson Field,"⁵¹ starting on 11 September 1942 after the torpedoing of the *Saratoga*.⁵² *Wasp*'s aircraft were also transferred to Guadalcanal after that ship was sunk. Other Marine units, as well as some AAF P-38s, continued to be ferried in while the battle raged on—until the Japanese withdrawal in February 1943.⁵³

Thus, the Marines learned that unless they had their own airplanes and their own escort carriers to transport these planes to the battle, they could not count on air support. Because the Navy and AAF chose to withhold their aircraft for other missions in the theater, the Marines were left empty-handed at Guadalcanal.⁵⁴ Consequently, the Marine Corps significantly expanded its air arm in the United States and campaigned within the Navy Department for its own escort carriers.⁵⁵

It is interesting to note that the priority of air missions at Guadalcanal was identical to the one in effect in North Africa and later codified in FM 100-20. That is, the Marines dedicated most of their sorties to defending Guadalcanal from air attack. They then tried to interdict Japanese ships carrying reinforcements and catch the destroyers and cruisers that had delivered a late-night shelling of Henderson Field. Finally, they supported marines on Guadalcanal by strafing and bombing Japanese troops and emplacements. In other words, the Ma-

rines' mission priorities on Guadalcanal were air superiority first, then interdiction, and finally CAS—identical to those the AAF would follow in North Africa.⁵⁶

Experts in Close Air Support

Once Marine aviators were freed from their air defense and ship-attack missions, they began to acquire considerable proficiency in CAS.⁵⁷ During the Bougainville campaign, Marine air worked in conjunction with ground forces to perfect modern CAS tactics.⁵⁸ Unfortunately, such opportunities occurred infrequently because the Marines had no escort carriers and, therefore, had to fly from nearby islands to support invasions. Indeed, Bougainville was the last time that Marine air and ground forces would operate together until Okinawa (except for limited employment at Peleliu and Iwo Jima).⁵⁹ In the meantime, Marine air units supported General MacArthur's Army forces in the southwest Pacific, where Marine squadrons could hop from field to field.

As an example of the AAF's conduct of CAS in the Pacific, the history of Marine aviation cites complaints from the Army's 7th Division during the Marshalls campaign:⁶⁰

The Seventh Division had, at Attu, experience in working with Army Air Force support (P-38's). At Kwajalein it had experience in working with Naval air support. Hence, it is believed that this division is better qualified than any other to judge the effectiveness of each system.

Personnel of this division were unanimous in the following comments:

- (1) Close Air support of infantry—"close" means within 200 yards of front line troops—is very effective and desirable as executed by Naval air.
- (2) Support as rendered by Army Air Force is not effective in assisting the advance of the infantry and may be detrimental.

The reasons advanced for the above statements were:

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- (1) Naval air was a workable system whereby air strikes can be directed effectively at targets within close range of friendly troops without danger to them.
- (2) Naval air units practice and rehearse with ground force units so each becomes familiar with the methods to be employed, and ground forces gain confidence in the air units.
- (3) Army Air Force units have no system and hence cannot be sufficiently controlled to permit close support of ground forces.
- (4) Army Air Force units do not practice or rehearse with ground force units. They do not know how ground force units operate; hence, if brought in close they are quite apt to bomb and strafe our own troops by mistake.⁶¹

One must remember, however, that the 7th Division's only experience with Army Air Forces CAS occurred very early in the war, when all forces were inexperienced (e.g., Attu was the first invasion attempted in the Pacific). Since then, the division had been supported by Navy air, which had benefited from two years of combat experience and much trial and error. Nevertheless, these comments by members of the 7th Division show that feelings ran high with regard to perceived differences in the ability and desire of different services to support ground troops in the Pacific.

Marine Lt Gen Holland M. Smith wrote another report on the differences among Marine, Navy, and Army Air Forces CAS at Saipan in June 1944. He echoed the "nigh-universal complaint about the Navy and Army close air support" when he said, "Too much time was required getting strikes executed."⁶² Alternately, in the invasion of Peleliu in September 1944, Marine ground and air forces worked together again, to the delight of Marine Gen W. H. Rupertus, who reported that Marine CAS was "executed in a manner leaving little to be desired."⁶³

Since Marine aviation could not participate in the central Pacific advance because of a lack of escort carriers, it followed the invasion of the Philippine Islands by the Southwest Pacific Area forces (fig.

NAVY AND MARINE EXPERIENCE

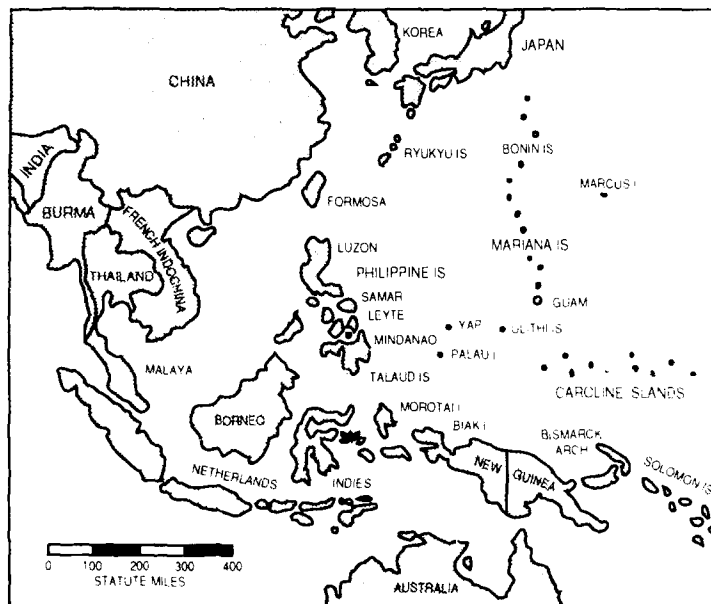


Figure 11. Southwest Pacific Area (From *Case Studies in the Development of Close Air Support*, ed. Benjamin Franklin Cooling [Washington, D.C.: Office of Air Force History, 1990], 296)

11). Thus, General MacArthur's Sixth and Eighth Armies in the Philippines were the recipients of most of the Marine CAS flown in the Pacific theater. Because the AAF had a sufficient number of fighters in the Philippines to establish air superiority for the entire theater, the Marines were finally able to concentrate on directly supporting land operations. Every unit the Marines worked with had high praise for the accuracy and timeliness of their air support. Ground combat units who had used both Marine and AAF aviation "were virtually unanimous" in preferring Marine aviation during the early months of the

campaigns.⁶⁴ Lt Gen Robert L. Eichelberger, commander of Eighth Army, was also complimentary:

I have heard a great number of reports from Major General Franklin Silbert of the X Corps and other unit commanders on the results of Marine-type dive bombing in the Philippines theatre. The value of close support for ground troops as provided by these Marine flyers cannot be measured in words and there is not enough that can be said for their aerial barrages that have cut a path for the infantry. From all quarters, commanders down to the men with the bayonets, I have heard nothing but high tribute.⁶⁵

Thus, as the Marines left the Philippines, they believed they had proven to Army and Marine audiences alike that they were better at CAS than were AAF and Navy pilots.⁶⁶ Furthermore, they had established the usefulness of CAS in what they believed was a direct refutation of the Army's FM 100-20, which they took as "a virtual diatribe against close air support."⁶⁷ Indeed, Marines interpreted FM 100-20 to mean that the Army thought CAS was "(1) not effective, (2) too dangerous, (3) too expensive."⁶⁸ Marine aviators were now acknowledged experts in CAS in the Pacific but were frustrated by not being able to use this expertise to support Marine ground forces. Nevertheless, they thought they would get their chance at Okinawa.

Okinawa

In preparation for the invasion of Okinawa in April 1945, the Marines conducted stateside training of four escort carriers and manned two fast-attack carriers with Marine air.⁶⁹ This meant that Okinawa would be the first amphibious operation in which Marine air could support Marine divisions without relying on nearby island bases. Instead, the escort carriers would deploy six Marine fighter squadrons to the captured airfield on Okinawa. Predictably, expectations within the Marine air-ground team were high.

Because the Japanese did not oppose the invasion at the beach, Marine air was able to establish itself at the airfield quickly.⁷⁰ How-

ever, the top priority of the Fifth Fleet remained air defense against kamikazes,⁷¹ so during the early weeks of the operation, land-based Marine air forces served as a fighter screen against suicide attacks.⁷² Thus, between 7 April and 3 May, Marine air flew only 704 ground-support sorties out of a total of 4,841,⁷³ while aircraft from fast-attack carriers and escort carriers flew most of the CAS for Marine ground forces.⁷⁴ One month after the initial landings, another Marine air group and an Army fighter group moved into newly opened fields. This expanded air strength allowed more land-based Marine aviation to fly CAS than had been possible earlier.⁷⁵

Unfortunately, the four Marine escort carriers were unable to participate in CAS, their primary mission. Instead, they were assigned combat air patrol and interdiction strikes in Japan and China.⁷⁶ "The [escort carriers] were badly used during their brief taste of the Pacific war. . . . For only a few days [eight days against Block Island and five days against the Gilbert Islands] were the [carrier-based] marines allowed to do any bombing on Okinawa."⁷⁷

Nevertheless, CAS from Marine, Navy, and AAF pilots received high marks at Okinawa.⁷⁸ In fact, the Marine Corps commander reported that air support was interchangeable:

Thus close support was employed more efficiently in the 82-day Okinawa battle than in any other Central Pacific operation. Improved communications, better trained personnel and more precise techniques enabled the aviators to bring their supporting weapons to bear in a manner that was generally—and often enthusiastically—praised by the ground commanders they were trying to help.⁷⁹

In sum, despite their high expectations for the invasion, the Marines had to devote most of their aircraft to protecting the Fifth Fleet and to carrying out interdiction strikes, instead of supporting Marine divisions on land.⁸⁰ The obvious lesson to be learned from Okinawa was that unless the Marines retained absolute control of their air forces, the latter might be diverted from supporting Marine ground forces.⁸¹

Marine Lessons Learned

As World War II drew to a close, Marines believed they had proven that CAS was effective, inexpensive (in terms of planes lost), and safe (to troops being supported). As we have seen, combat experience in Saipan, the Philippines, and Okinawa attests to the accuracy and general high quality of Marine CAS.⁸² Further, the Pacific campaigns demonstrated that losses of Marine aircraft due to AAA and small-arms fire were negligible compared to losses in air-to-air combat (discussed later), a fact that contradicts FM 100-20's reasoning for assigning a low priority to the CAS mission. Finally, as Marine aviators honed their skills during the war, CAS became more accurate and less dangerous to ground troops. For example, of the 10,506 sorties controlled by the Marine landing force air support control units (LFASCU), responsible for all CAS on Okinawa, only 10 involved faulty bomb drops—a significant improvement over earlier experience in the Pacific.⁸³

The Marines thus reasoned that they should own and control their own air forces because only the Marine Corps trained and equipped its forces to specialize in CAS as a primary mission. To their way of thinking, this made Marine pilots and ground controllers an integrated team that performed CAS better and quicker than their counterparts in any other service.

Lessons Not Learned

Our knowledge of the AAF's European experience, however, raises three points that argue against the Marines' position on centralized functional control of air power. First, theater air priorities take precedence over tactical battle priorities. Although the Marines wanted to dedicate their air forces to CAS, the realities of combat forced them to address theater air missions according to the same

priorities proposed by FM 100-20. For example, on Guadalcanal, local air superiority came first, followed by interdiction of Japanese ships, and then CAS. In the Philippines, the Marines could dedicate their aircraft to ground support only because the AAF had established air superiority and the Navy had isolated the island. At Okinawa, the kamikaze threat to the Fifth Fleet and the air defense of Okinawa took precedence over ground support during the early weeks of the campaign.⁸⁴ Marine air groups were not released to perform dedicated CAS until one month after D day, when the arrival of large air forces freed them to perform that mission. Although the Marines contend that they should confine themselves to CAS, their experience in the Pacific in World War II made it clear that this is possible only if someone has attended to air superiority and interdiction—missions the Marines themselves flew at Guadalcanal and Okinawa.

Second, the Marines lacked air support at Guadalcanal precisely because three commanders (General Vandegrift, General MacArthur, and Admiral Fletcher) exercised control of their own air assets during that battle. A centralized, functional system of air control, however, would probably have been successful in diverting out-of-theater assets to cross theater boundaries and to support the battle at Guadalcanal.

Third, the Marines' objection to FM 100-20's stance on the deadly effect of AAA on CAS needs to be put into perspective. The Marines' objection was based on the fact that small-arms fire and AAA were not effective in stopping their CAS mission in the Pacific. In reality, the view of both the Marines and FM 100-20 on this matter is probably correct, given their respective theaters of operations. In Europe, the Luftwaffe depended primarily on AAA as a defensive air weapon and had so equipped its forces. (One should remember that the Americans in Italy were losing 200 planes a month despite the fact that they had achieved almost total air superiority.) In contrast, the Japanese relied strictly on fighters for air defense.⁸⁵ Thus, to compare the air defenses in the Pacific to those in Europe is to compare two vastly different situations.

The Need to Control Organic Assets

As we have seen, the desire of both the Navy and Marine Corps to control their own air forces is based on their experiences in World War II. Consequently, the Navy retains control of its carrier aircraft in order to protect the fleet and to shield those aircraft from unnecessary attrition in land action. Because of the threat to the fleet when it is close to shore and because of the Navy's tradition of independent command at sea, a Navy fleet commander—not a land-based functional air component commander—controls Navy forces.

Similarly, the Marines believe that they must control their own air forces so that aircraft will be available to support the land battle and not be diverted to non-CAS missions. Thus, both services oppose the European-based doctrine of FM 100-20 that calls for centralized functional control of all tactical air power across a theater, preferring a system of composite organizations in control of their own land, sea, and air power. In the Korean War, these opposing views on the control of air power came into direct conflict, engendering considerable disagreement among the services.

Notes

1. While the Army and AAF were busy in Europe working out strategic bomber and FM 100-20 tactical air doctrine, the Navy and Marine Corps were forming lasting impressions on control of air power in the Pacific—the Navy-controlled theater. Although the US Navy had forces operating in the Atlantic and supported some of the European invasions, the Atlantic was primarily a British navy theater. The US Navy focused instead on the Pacific and the Mahanian threat of the Japanese navy. Consequently, US Navy views on the centralized control of air power reflect primarily the Navy's experience in the Pacific theater. The Marine Corps experience is also based on the Pacific because it was the only theater in which the Marines saw action. Accordingly, their air power doctrine reflects the small-unit nature of that theater. Wesley Frank Craven and James Lea Cate, eds., *The Army Air Forces in World War II*, vol. 4, *The Pacific: Guadalcanal to Saipan, August 1942 to July 1944* (1950; new imprint, Washington, D.C.: Office of Air Force History, 1983), xiii.

2. Craven and Cate, vol. 5, *The Pacific: Matterhorn to Nagasaki, June 1944 to August 1945* (1953; new imprint, Washington, D.C.: Office of Air Force History, 1983), viii. *Battle line* refers to the linear positioning of a fleet's heavy ships of the line, formed to more effectively fire broadsides at an enemy.

3. Craven and Cate, vol. 1, *Plans and Early Operations: January 1939 to August 1942* (1948; new imprint, Washington, D.C.: Office of Air Force History, 1983), 444; and Samuel Eliot Morison, *History of United States Naval Operations in World War II*, vol. 3, *The Rising Sun in the Pacific: 1931-April 1942* (Boston: Little, Brown and Company, 1948), 398. General Doolittle's attack did much more than simply bolster morale. The Japanese military, shamed for allowing an attack on the homeland, expanded its defensive island frontier in the Pacific—a decision that proved fatal. United States Strategic Bombing Survey, *Japanese Air Power* (Washington, D.C.: Military Analysis Division, 1946), 26; and Craven and Cate, vol. 5, 740.

4. E. B. Potter, ed., *Sea Power: A Naval History*, 2d ed. rev. (Annapolis: Naval Institute Press, 1981), 294.

5. Morison, 389.

6. Ronald H. Spector, *Eagle against the Sun: The American War with Japan* (New York: Vintage Books, 1985), 154; and Thomas B. Buell, *The Quiet Warrior: A Biography of Admiral Raymond A. Spruance*, Classics of Naval Literature, ed. Jack Sweetman (1974; reprint, Annapolis: Naval Institute Press, 1987), 130.

7. Potter, 294.

8. Morison, vol. 4, *Coral Sea, Midway and Submarine Actions: May 1942–August 1942* (Boston: Little, Brown and Company, 1949), 63; and Craven and Cate, vol. 4, 6.

9. Kenneth J. Hagan, *This People's Navy: The Making of American Sea Power* (New York: Free Press, 1991), 312.

10. This concentration does not refer to the early World War II naval debate over whether it was better to steam all carriers together (next to each other) in one concentrated tactical formation or to spread them out into individual task forces (carriers tens of miles apart). It refers to being able to orchestrate all operational forces against the same target in a concentrated attack, much as Count Helmuth von Moltke (the elder) accomplished on land in the nineteenth century. Early concerns about the vulnerability of US carriers led Admiral King to direct that no two carriers could steam together. Further, attacks against US carriers at Midway led to their being dispersed at sea. Japanese (and later US Navy) tacticians argued that the multicarrier task force was optimum for defensive AAA and fighter coverage. Admiral Yamamoto erred at Midway by concentrating his heavy AAA-equipped

battleships hundreds of miles behind the Japanese carrier task force. As a result, once the American fighter-bombers penetrated the Japanese fighter defense screen, they could attack the four enemy carriers unopposed. Clark G. Reynolds, *The Fast Carriers: The Forging of an Air Navy* (Huntington, N.Y.: Robert E. Krieger Publishing Company, 1978), 6–7, 22, 26, 29.

11. Ibid., 195, 204, 282; Morison, vol. 12, *Leyte: June 1944–January 1945* (Boston: Little, Brown and Company, 1958), 193–97; and *United States Army in World War II: The War in the Pacific*, vol. 5, *Leyte: The Return to the Philippines* by M. Hamlin Cannon (Washington, D.C.: Office of the Chief of Military History, Department of the Army, 1954), 92.

12. General MacArthur planned the Leyte invasion so that it occurred outside the range of land-based air. Hence, MacArthur was totally dependent on Admiral Halsey and Third Fleet for air support. "He was bending every effort to expedite installation of land-based planes at Leyte, but he considered that the Third Fleet's covering mission was its essential and paramount duty." Craven and Cate, vol. 5, vii–viii, 360–61, 364, 369. The point here is not to criticize Admiral Halsey's decision to leave the escort carrier force alone to guard the beachhead, but to show the Navy's desire to keep the fleet concentrated.

13. Buell, 170.

14. Reynolds, 275, 282.

15. Potter, 298.

16. E. B. Potter, "Admiral Nimitz and the Battle of Midway," *US Naval Institute Proceedings* 102, no. 7 (July 1976): 62.

17. Reynolds, 11–13.

18. Potter, *Sea Power*, 296; and Spector, 167.

19. Reynolds, 29.

20. Potter, *Sea Power*, 301.

21. John Keegan, *The Price of Admiralty: The Evolution of Naval Warfare* (New York: Penguin Books, 1990), 221.

22. Reynolds, 13, 62.

23. *Japanese Air Power*, 12. Four Japanese carriers did not fight the US Pacific Fleet at Midway. Two other carriers had been damaged earlier at the Battle of Coral Sea and were being repaired. Thus, six carrier air groups were available for land basing at Truk Island and other islands held by the Japanese. Morison, vol. 4, 63.

24. *Japanese Air Power*, 13.

25. *The United States Strategic Bombing Surveys (European War) (Pacific War)* (30 September 1945, 1 July 1946; reprint, Maxwell AFB, Ala.: Air University Press, October 1987), 60.

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26. *Japanese Air Power*, 15.
27. Robert Sherrod, *History of Marine Corps Aviation in World War II*, 2d ed., Great War Stories Series (San Rafael, Calif.: Presidio Press, 1980), 133; and Reynolds, 391.
28. *Japanese Air Power*, 16.
29. Buell, 298.
30. *Ibid.*, 301; and Craven and Cate, vol. 5, 740.
31. *Strategic Bombing Surveys*, 61.
32. *United States Army in World War II: The War in the Pacific*, vol. 1, *Okinawa: The Last Battle* by Roy E. Appleman et al. (Washington, D.C.: Office of the Chief of Military History, Department of the Army, 1948), 257.
33. Morison, vol. 14, *Victory in the Pacific: 1945* (Boston: Little, Brown and Company, 1960), 89, 133.
34. Morison, vol. 13, *The Liberation of the Philippines: Luzon, Mindanao, the Visayas, 1944-1945* (Boston: Little, Brown and Company, 1959), 58.
35. *Ibid.*; Morison, vol. 14, 91.
36. *Ibid.*, 178, 189; and Craven and Cate, vol. 5, 629, 632.
37. Morison, vol. 14, 217.
38. Robert Sherrod, *On to Westward: War in the Central Pacific* (New York: Duell, Sloan, and Pearce, 1945), 324-33; and Morison, vol. 14, 389-92.
39. Carriers could ill afford to absorb blows from land-based air. Although an airfield could be fixed and used again, the loss of a carrier might be permanent.
40. Morison, vol. 13, 58.
41. Reynolds, 20, 31.
42. Sherrod, *Marine Corps Aviation*, 31-32; and Benis M. Frank and Henry I. Shaw, Jr., *History of US Marine Corps Operations in World War II*, vol. 5, *Victory and Occupation* (Washington, D.C.: Historical Branch, US Marine Corps, 1968), 410.
43. This was the standard procedure during the war for transferring nonqualified AAF and Marine pilots to various islands. It was also used in the Operation Torch landings to ferry AAF pilots to North Africa.
44. Spector, 106; Sherrod, *Marine Corps Aviation*, 44; and Morison, vol. 3, 252-54.
45. *Strategic Bombing Surveys*, 11; Sherrod, *Marine Corps Aviation*, 76; Morison, vol. 5, *The Struggle for Guadalcanal: August 1942-February 1943* (Boston: Little, Brown and Company, 1949), 211; and *United States Army in World War II: The War in the Pacific*, vol. 10, *Strategy and Command: The First Two Years* by Louis Morton (Washington, D.C.: Office of the Chief of Military History, Department of the Army, 1962), 354.
46. Sherrod, *Marine Corps Aviation*, 77. Navy history states that General Vandegrift informed Vice Adm Robert L. Ghormley that Henderson Field was ready for

use in "dry weather" on 17 August 1941. The date of 12 August 1941 quoted by the Marines was for a trial landing by a Catalina seaplane. Morison, vol. 5, 68.

47. Morison, vol. 5, 73; and Sherrod, *Marine Corps Aviation*, 79.

48. Sherrod, *Marine Corps Aviation*, 81–82. The P-400 was a "bastard version of the P-39 originally intended for export." Morison, vol. 5, 74; and Craven and Cate, vol. 4, 40–41.

49. Morton, 353; and Sherrod, *Marine Corps Aviation*, 85.

50. The fuel transfer and storage facilities at Henderson Field were woefully inadequate for supporting heavy bombers. This deficiency, as well as the dry-weather-only runways, was caused by the Navy's "lack of vigor in bringing up surface transport to support the initial operation." Craven and Cate, vol. 4, 43.

Robert Sherrod writes that General MacArthur withheld two P-38 squadrons from the defense of Guadalcanal until higher authorities forced him to release them. In contrast, Craven and Cate report that "the P-38 was not to be available for combat until November" and that the first P-38 unit in-theater (339th Fighter Squadron) was sent directly to Guadalcanal, arriving on 12 November 1942. Sherrod, *Marine Corps Aviation*, 85; and Craven and Cate, vol. 4, 42, 52, 59.

51. Sherrod, *Marine Corps Aviation*, 90.

52. *Ibid.*, 88; and Morison, vol. 5, 106.

53. For a listing of "Allied Air Squadrons at Henderson Field, Guadalcanal," see Morison, vol. 5, 374–75.

54. Buell, 202.

55. Frank and Shaw, 410.

56. Sherrod, *Marine Corps Aviation*, 96. It is interesting to note that the only dedicated ground-support aircraft in the early going at Guadalcanal was the AAF's P-400 since it was inferior to the Zero in air-to-air combat and could not climb high enough to meet the Zero anyway. (Indeed, most of the original P-400s were all shot down in the opening air battles.) Morison, vol. 5, 74; Morton, 353; and Craven and Cate, vol. 4, 41–42, 81–82.

57. Early criticisms of the AAF by Marine aviation history include the slowness of the centralized control system and the questionable capabilities of AAF pilots. However, Marine criticism of the Navy is limited to the latter's slow system of centralized control. Thus, one finds mixed criticisms of AAF and Navy CAS, depending on whether the Marines are discussing the issue of timeliness (both AAF and Navy) or just CAS ability (AAF only).

58. Sherrod, *Marine Corps Aviation*, 189. Although Sherrod points to this campaign as the beginning of CAS tactics, one should note that, while the Bougainville invasion occurred in late October 1943, the XII Air Support Command had landed at Salerno in September 1943 and was also beginning to develop modern CAS procedures.

59. *Ibid.*, 192, 215, 226, 250, 325.

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60. Morison, vol. 7, *Aleutians, Gilberts and Marshalls: June 1942–April 1944* (Boston: Little, Brown and Company, 1951), 280–81.

61. Army Air Forces Evaluation Board, Pacific Ocean Area (POA), Report no. 3 (Orlando, Fla.: Army Air Forces Tactical Center, 15 November 1944), 14–17; Sherrod, *Marine Corps Aviation*, 293; Cannon, 93; and Craven and Cate, vol. 4, 307, 383–85. This passage creates the wrong impression; however, since Sherrod gives it such a prominent place in his semiofficial history of Marine Corps aviation, I include it if only to refute it. First, as stated in the report, the Attu invasion was the first of its kind in the Pacific. All of the services made many mistakes: two Navy gunfire-support ships collided in the fog; the Navy completely ran out of bombardment ammunition; *Nassau* escort-carrier pilots unknowingly bombed 32d Infantry, 7th Division, after the troops moved forward during the night; and P-38s accidentally strafed friendly troops, as cited. Morison, vol. 7, 46–48.

Furthermore, General Arnold rejected this report on 14 December 1944:

This Headquarters does not concur with the evaluation, conclusions and recommendations contained in Section VI, pages 14 through 60, inclusive, as they are based upon misunderstanding of Tactical Air Force organization and employment and upon misinterpretation of ESR 100-20. . . . It is directed that a copy of this letter be attached to each copy of subject report.

Thus, the report can hardly be considered an official acknowledgment of the difficulties with the CAS capabilities or control systems of the AAF. In contrast, at the time this report was written (15 November 1944), the American and British armies were approaching the Rhine with a very successful CAS system in place. Col William F. McKee, deputy assistant chief of Air Staff for operations, commitments and requirements, Headquarters Army Air Forces, for Gen Henry H. Arnold, to commanding general, AAF Tactical Center, letter, subject: Report no. 3, AAF Evaluation Board, POA, 14 December 1944.

62. Sherrod, *Marine Corps Aviation*, 251; and *United States Army in World War II: The War in the Pacific*, vol. 9, *Campaign in the Marianas* by Philip A. Crowl (Washington, D.C.: Office of the Chief of Military History, Department of the Army, 1960), 132. After the invasion of Tinian, General Smith repeated his criticism of the slow, centralized systems of the Army and Navy (page 299).

63. Sherrod, *Marine Corps Aviation*, 257.

64. *United States Army in World War II: The War in the Pacific*, vol. 11, *Triumph in the Philippines* by Robert Ross Smith (Washington, D.C.: Office of the Chief of Military History, Department of the Army, 1963), 655. Initially, fratricide was a serious problem for the AAF in the Philippines. Lt Gen Walter Krueger, commander of Sixth Army, radioed the following message to Lt Gen George C. Kenney, commander of Far East Air Forces, on 4 February 1945: "I must insist that you take effective measures to stop the bombing and strafing of our ground forces by friendly planes. . . . These repeated occurrences are causing ground troops to lose confidence in air support and are adversely affecting morale." Historian Robert Ross

Smith specifically accuses Craven and Cate of slighting the problem, stating that "the records of the ground units clearly demonstrate that there were many more errors than the Air Force's history would lead one to believe" (page 236).

65. Sherrod, *Marine Corps Aviation*, 323. The Marines supported X Corps almost entirely because Thirteenth Air Force was tasked to support the Australians in Operation Oboe, the reoccupation of Borneo. "In June, however, during the hard fighting in the Davao area, the P-38s of the 18th Fighter Group were frequently called on for napalm strikes—a type of attack the Marines had not mastered as well as they had dive bombing." Craven and Cate, vol. 5, 463.

66. Although this perception of the Marines' performance was valid at the outset of the Philippine invasion, it had changed by the end of the campaign:

Although some of the Army divisions on Luzon preferred to have Marine Corps aircraft support them, Fifth Air Force pilots, who had previously had rather limited experience in close air support operations, became well versed in such activity, and some of the Fifth's squadrons came to provide as excellent close air support as was to be executed anywhere during World War II. In the end, the Fifth Air Force did its job and did it well.

Smith, *Triumph in the Philippines*, 236.

67. Sherrod, *Marine Corps Aviation*, 191.

68. *Ibid.*, 291.

69. *Ibid.*, 359–63.

70. *Ibid.*, 379; and Frank and Shaw, 176.

71. Frank and Shaw, 176; and Craven and Cate, vol. 5, 628–29. According to doctrine governing amphibious operations, the Navy task force commander retained control of air defense of the landing zone. Thus, air forces of the Marines and AAF remained under control of the Fifth Fleet until the area was secured.

72. Charles S. Nichols and Henry I. Shaw, Jr., *Okinawa: Victory in the Pacific* (1955; reprint, Tokyo: Charles E. Tuttle Company, Inc., 1966), 261–62; and Frank and Shaw, 177. Land-based aircraft were better able to reach the Japanese kamikazes because of carrier landing restrictions during dusk and dawn and because the normal movement of Task Force 58 made it less capable of defending the static invasion fleet (although it was easily capable of defending itself and of providing air support to the ground forces).

73. Sherrod, *Marine Corps Aviation*, 385; and Frank and Shaw, 187.

74. Morison, vol. 14, 217; Sherrod, *Marine Corps Aviation*, 375; Frank and Shaw, 671; and Nichols and Shaw, 263.

75. Nichols and Shaw, 270; Sherrod, *Marine Corps Aviation*, 399.

76. Nichols and Shaw, 263; and Frank and Shaw, 415, 427, 429.

77. Sherrod, *Marine Corps Aviation*, 397.

78. "Probably as much as 60 per cent of the direct support on Okinawa was flown from the CV's and CVE's (which included a small proportion of Marine flyers)." Sherrod, *Marine Corps Aviation*, 409.

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79. Ibid., 408.

80. Frank and Shaw, 670-71; and Sherrod, *Marine Corps Aviation*, 386.

81. Frank and Shaw, 671.

82. Both of the official Marine histories of operations in Okinawa concluded that CAS on Okinawa was not an issue. "Marine and Army planes were used interchangeably and operated under the same tactical command." Nichols and Shaw, 269. "A less-than-completely satisfactory performance in these two aspects of air support [timeliness and performance] served as the crux of Marine dissatisfaction with the type of support they received until late in the war." Frank and Shaw, 671.

83. Sherrod, *Marine Corps Aviation*, 409-10. Sherrod writes that the Marine Corps felt that only its air support was accurate enough to prevent the accidental bombing of friendly troops. In contrast, the report of the Strategic Bombing Survey on AAF's Fifth Air Force indicated that in New Guinea and the Philippines, pinpoint CAS "technique was developed to the extent that our own ground troops in some cases called for and received effective attacks within 100 yards of their forward positions." United States Strategic Bombing Survey, *The Fifth Air Force in the War against Japan* (Washington, D.C.: Military Analysis Division, 1947), 76.

84. Sherrod, *On to Westward*, 324-33.

85. Kenneth P. Werrell, *Archie, Flak, AAA, and SAM: A Short Operational History of Ground-Based Air Defense* (Maxwell AFB, Ala.: Air University Press, December 1988), 53; and Robert Frank Futrell, *Ideas, Concepts, Doctrine: Basic Thinking in the United States Air Force*, vol. 1, 1907-1960 (Maxwell AFB, Ala.: Air University Press, December 1989), 163.

Chapter 4

Korea: The First Joint Force Air Component Commander

The Korean War provided a severe test for the air power doctrine of the four military services, each of which wished to retain control of its own air forces. Before considering the control of air power in Korea, however, we would do well to review some lessons from World War II, especially those that led the JCS to resort to different command relationships among the services in the European and Pacific theaters.

Air Power Doctrine, 1945-50

In Europe the Americans originally followed British doctrine, which called for an overall theater commander with subordinate land, sea, and air component commanders. However, as American military strength and experience grew, the Combined Chiefs of Staff adopted alternate command structures in order to keep peace between the Allies. Although Allied armies fought under General Eisenhower's theater command, the strategic air forces (Eighth Air Force, Fifteenth Air Force, and RAF Bomber Command) managed to break free from Eisenhower's control after Operation Overlord.¹ Thus, in Europe the Army and its tactical air forces followed a hierarchical control model while the Navy and strategic air forces followed an independent "in support of" command model. Of course, everyone was subject to the overall authority of the Combined Chiefs of Staff.²

In contrast, the Navy and Army shared command of the Pacific theater.³ Reasons for this division include the need for a naval officer to command the US Pacific Fleet,⁴ the hesitancy of the Australian government to place their troops under the command of a Hawaii-

based officer, and the problem of dealing with America's senior military commander, Gen Douglas MacArthur.⁵ Whatever the case, the JCS established two geographic regions (Southwest Pacific Area and Pacific Ocean Area—fig. 12), whose Army and Navy commanders reported to Washington. In the field, each command had its own Army, Navy, AAF, and Marine Corps forces. If one command needed additional forces (e.g., the Fast Carrier Task Force), the other commands would temporarily provide them. When B-29s of the Twentieth Air Force arrived for their strategic bombing campaign against Japan, they remained under JCS command from Washington.⁶

After the war, the services adopted different positions on the structure of command, based on their wartime experiences: The Army advocated a hierarchical structure, with one commander at the top; the AAF supported the Army position for tactical air support forces but

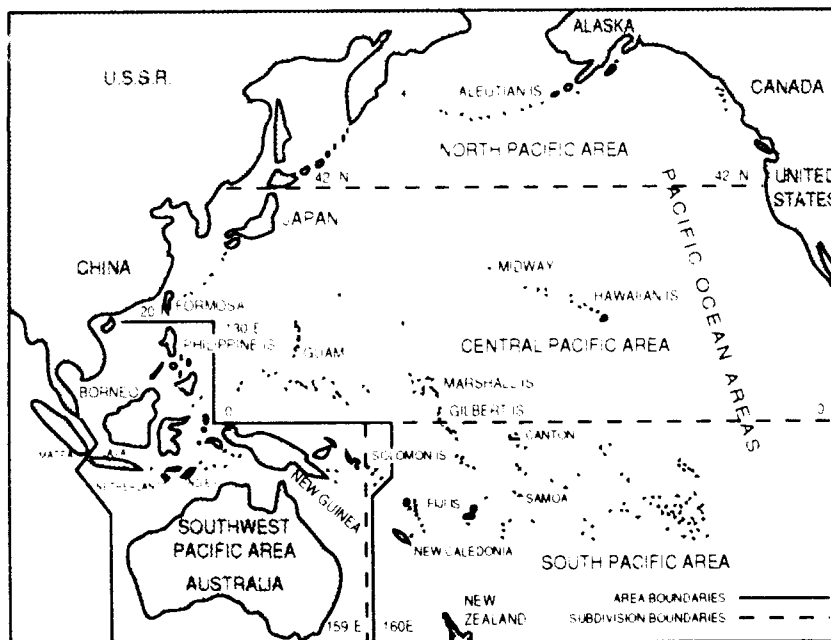


Figure 12. Pacific Ocean Command in World War II (From E.B. Potter, ed., *Sea Power: A Naval History*, 2d ed. [Annapolis, Md.: Naval Institute Press, 1981], 291)

reserved control of theater strategic air forces for itself; and the Navy and Marine Corps retained control of their forces in joint operations, citing the traditional Navy position that the joint mission is best achieved through the coordinated efforts of independent commanders. In 1946 the JCS agreed to formalize the concept of unified theater commands, establishing the latter with "single commanders in chief charged with directing all assigned air, sea, and land forces through service component commanders."⁷

National Security Act of 1947

The National Security Act of 1947 made the JCS position official, granted the Air Force status as an independent service, and started an intense struggle between the services over roles and missions, part of which was motivated by the Marines' and Navy's suspicion that the Army and Air Force wanted to absorb Marine and Navy air forces.⁸ Secretary of Defense James V. Forrestal attempted to resolve such interservice differences at a JCS conference at Key West, Florida, in 1948.⁹ At this meeting, the JCS agreed that the Air Force would be responsible for the primary functions of general air superiority and strategic air warfare, while the Navy would maintain local air superiority and conduct air operations in support of naval campaigns, as well as conduct other traditional sea power missions.¹⁰

However, an abrogation of the Key West agreements occurred when Louis Johnson, the new secretary of defense, abruptly cancelled plans for the Navy's supercarrier, *United States*.¹¹ This action led to an all-out fight in Congress, with the Navy and Marine Corps on one side and the Army and Air Force on the other. Although the Navy repelled the perceived threat to carrier aviation, it did so at a high cost. Some parties accused that service of unethical behavior during the congressional debate, and its highest admirals invited charges of insubordination by having openly rebuked the JCS plan for unification.¹² Further, Adm Louis Denfeld, chief of naval operations, was relieved of command in 1949.

Because of the Navy's tarnished image over unification doctrine, it was hardly in a position to object to General MacArthur's command

structure for the Korean War, which had broken out in 1950. In accordance with the National Security Act of 1947 and the Key West agreements, the Navy expected to control all naval forces for a naval war, the Marine Corps expected to control its forces in amphibious operations, and the Air Force expected to control all air forces for an air war.¹³

Command Structure for the Korean Theater

Although the National Security Act called for a unified command structure, General MacArthur had retained the same Army-based structure he used in Japan at the end of World War II.¹⁴ Because Far East Command (FEC) had only two components—Far East Air Forces (FEAF) and Naval Forces Far East (NAVFE) (fig. 13)—General MacArthur (later, Gen Matthew B. Ridgway) was both ground component commander and theater commander.

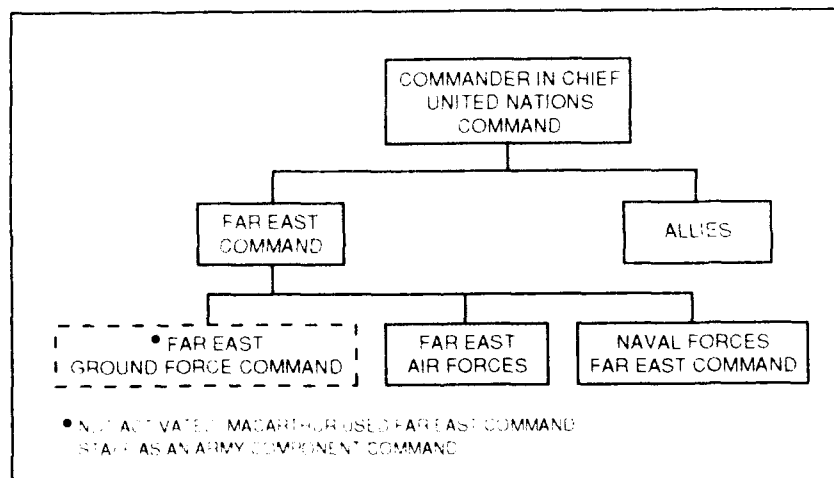


Figure 13. Korean Command Structure (1950) (From William W. Momyer, *Airpower in Three Wars* [Washington, D.C.: Department of the Air Force, 1978], 53)

The year 1951 saw the establishment of Army Forces Far East (AFFE), but it had no staff and was not operational. Not until Gen Mark W. Clark restructured FEC into a true joint command in 1953 did a functioning theater ground-component command come into being. However, General Clark retained command of both the theater FEC and the ground component AFFE.¹⁵

In the Korean War, General MacArthur followed General Eisenhower's World War II command model, not the North African model. In South Korea, the Eighth Army commander was the de facto ground component commander after X Corps and Eighth Army rejoined in 1951. Additionally, Fifth Air Force collocated and supported Eighth Army for the entire war.

Air Power in the Korean War

At the start of the Korean War, FEAF, the air component of FEC, moved immediately to control all air power in-theater. Although the Navy and Marines had no objection to FEAF's coordinating their sorties, control was another matter. To understand the controversy over control in Korea, one must examine the centralized command of air forces, the priority assigned to CAS, the performance of CAS, and the lessons learned by the services.

Centralized Command of Air Power

In Korea (fig. 14) the Air Force came close to realizing its concept of an overall theater air commander.¹⁶ On the Air Force side, FEAF had unity of command over all Air Force assets in-theater throughout the war, including B-29s. This model was patterned on the one used in North Africa in World War II rather than the European model, which allowed strategic air forces to operate independently.¹⁷

By 1951 FEAF also controlled Marine air. Initially, the Marine Corps retained control of its air forces during the Inchon landing and X Corps's drive up Eastern Korea in 1950.¹⁸ After X Corps retreated from the Chosin Reservoir and redeployed to South Korea on Eighth

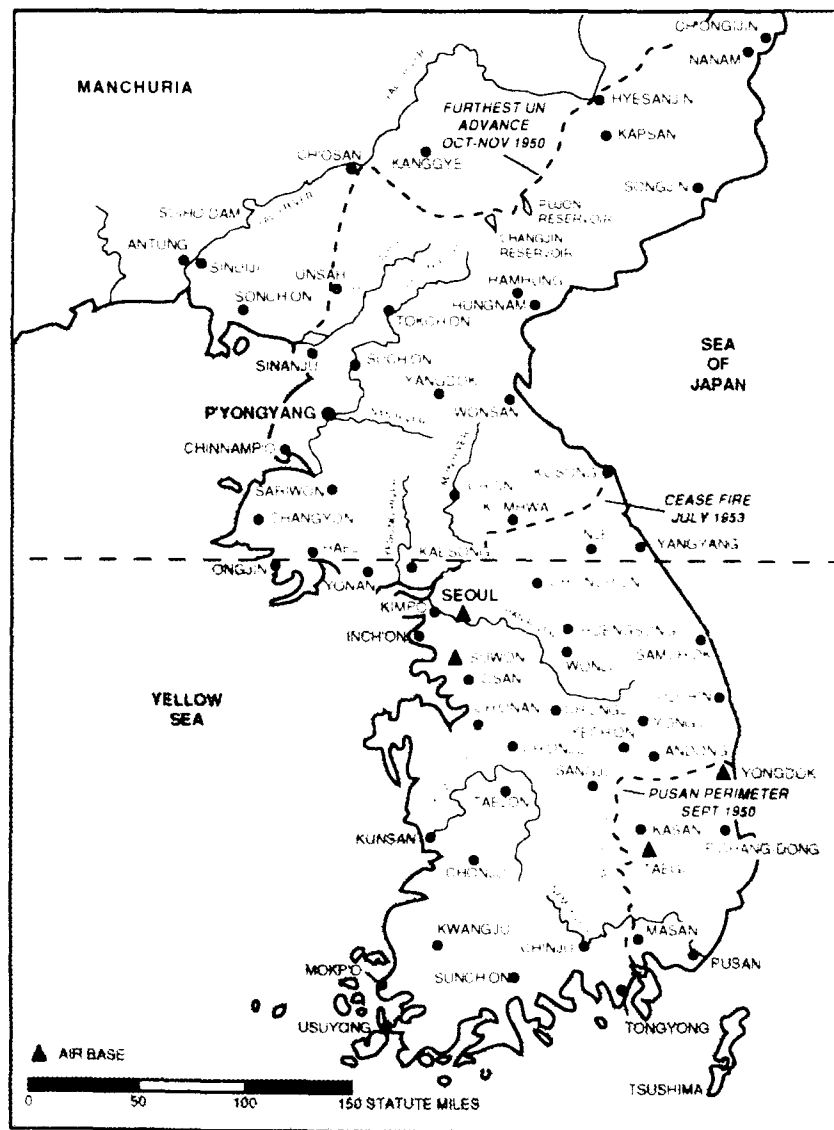


Figure 14. Korea (From Allan R. Millett, "Korea, 1950-1953," in *Case Studies in the Development of Close Air Support*, ed. Benjamin Franklin Cooling [Washington, D.C.: Office of Air Force History, 1990], 346)

Army's right flank, Fifth Air Force reclaimed control of Marine air.¹⁹ For the rest of the war, the Marines flew in support of all ground units under the direction of Fifth Air Force.

In contrast, Navy air remained under the control of Task Force 77. The Navy was primarily concerned with the Chinese and Soviet threats to its fleet: "The dangers of air and submarine attack made it undesirable for carriers to operate for more than two days in the same location."²⁰ But the short legs of carrier aircraft and the deep interdiction missions requested by FEAF meant that carriers would have to stay in the same area to carry out routine bombing missions. To grant Gen George E. Stratemeyer operational control (OPCON) over Navy air was to grant him *de facto* OPCON over the movement of the carrier task force—a situation unacceptable to the Navy. Thus, on 16 July 1950²¹ the commander in chief of Far East forces delegated only "coordination control"²² to FEAF. Although coordination between the services began slowly,

by early 1951 things had improved. Communications between Task Force 77 and the JOC [joint operations center] were at last working *effectively*; air group commanders from the fast carriers were being sent in rotation to handle the liaison function; in due course a permanent assignment would be made.²³

Eventually, the submarine threat posed by Red China died down, and the carriers took up station in the Sea of Japan where they participated in a joint targeting system and coordinated their sorties with the FEAF-controlled sorties.²⁴ In this phase, air missions were essentially assigned on a geographical basis. That is, FEAF and NAVFE agreed to a coastal area of operations for Task Force 77's planes (fig. 15). Such distinct areas of responsibility (AOR) would resurface in Vietnam in the "route package" system. However, in Korea the Navy's area was not a distinct AOR because FEAF flew coordinated missions into the Navy region throughout the war.

Priority of Close Air Support

A major point of contention among the services had to do with FEAF's air priorities and the quality of CAS performance. By the end

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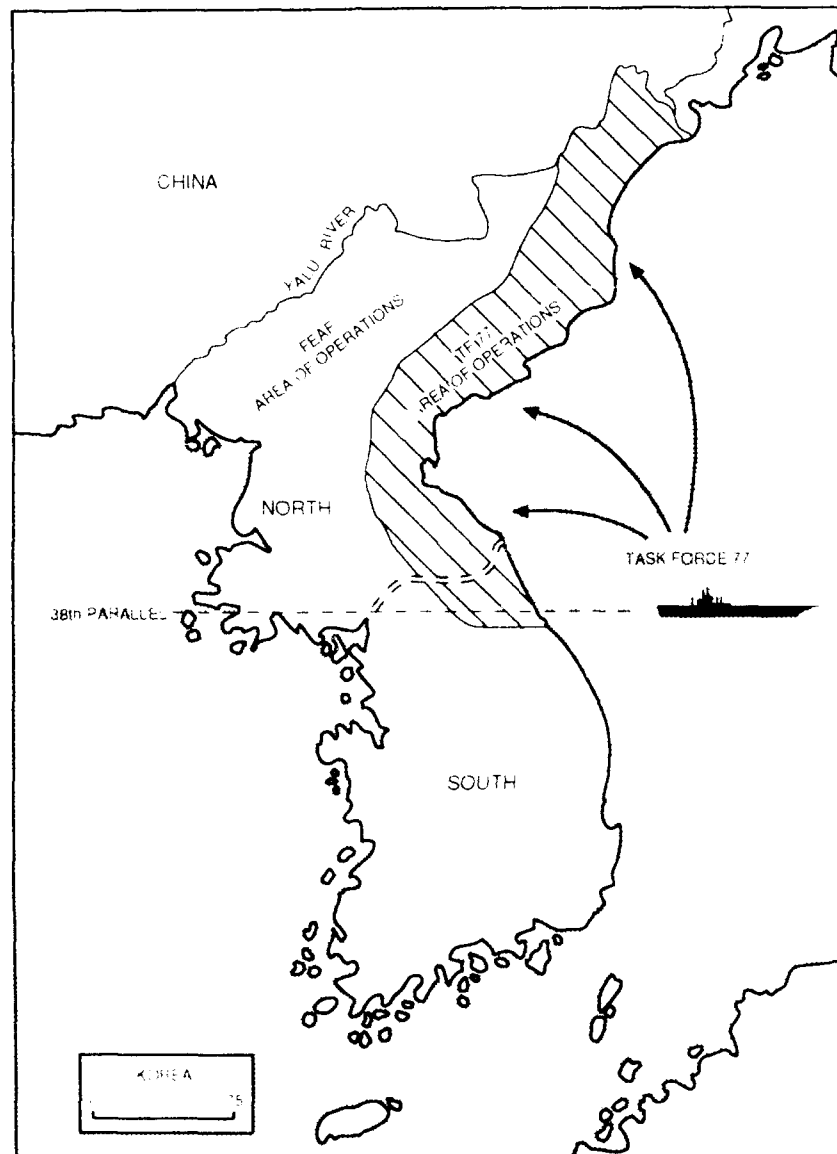


Figure 15. Areas of Responsibility of Naval Forces Far East (From William W. Momyer, *Airpower in Three Wars* [Washington, D.C.: Department of the Air Force, 1978], 60)

of the war, all services agreed that establishing local air superiority was the first priority of air operations. Furthermore, the experience at the Pusan Perimeter in 1950 convinced everyone of the necessity of overall coordination of air sorties, including CAS.²⁵ Doctrinally, the services had different views about whether interdiction or CAS should be assigned the higher priority in land operations.²⁶

Air Force View. Initially, the Air Force believed that interdiction should have a higher priority than CAS.²⁷ This thinking followed the guidance of FM 100-20, which was incorporated into FM 31-35, *Air-Ground Operations*, after World War II. The latter stated that "the tactical air commander, in close cooperation with army group commander, determines the allocation of air effort to be made available to the separate tactical air forces for employment with their associated armies."²⁸ Thus, FEAF was doctrinally justified in assigning its own priority to CAS unless the theater commander chose to override that decision. The latter did in fact quickly assert his authority as the ground war deteriorated in 1950.

By the end of the war, new USAF doctrinal manuals were less rigid about the priority of CAS. Issued in 1953, Air Force Manual (AFM) 1-2, *United States Air Force Basic Doctrine*, acknowledged that the "coordinated employment of air forces in the land battle is essential" but pointed out that attack in depth upon enemy lines of communications was "more profitable."²⁹ Similarly, in the same year AFM 1-3, *Theater Air Operations*, remarked that "close air support actions contribute less to the furtherance of surface actions than do the gaining and maintaining of air superiority and the interdiction of the enemy's lines of communication leading to the combat zone."³⁰ Further, in the FEAF commander's summary of the air war, Gen Otto P. Weyland stated that "in a static situation, close support is an expensive substitute for artillery fire."³¹ However, he also pointed out that "in contradistinction to conditions of static warfare on the ground, I should like to make clear that I believe strongly in all-out close air support of ground forces when they are engaged in major operations to achieve decisive objectives."³²

Navy View. At first, Navy doctrine was ambivalent about the priority of CAS and interdiction, saying that it should be dictated by the theater situation. After the war began, however, the Navy sided with the Marine Corps in favor of CAS.³³ For example, NAVFE's initial agreement with FEAF on the use of carrier air in Korea provided that "first priority for carrier operations would be in close support, second priority would go to interdiction south of the 38th parallel, and third priority to strikes on Bomber Command targets beyond that line."³⁴ Although Navy aircraft attempted to concentrate on CAS, execution problems with the Fifth Air Force system in South Korea eventually forced them to give up CAS and pursue FEAF-coordinated interdiction bombing instead.

Army View. The Army accepted the Air Force's priority of air support as reflected in FM 31-35, which complemented the Army's doctrine on the use of heavy artillery.³⁵ That is, the Army would require CAS only in extreme or rapidly moving battle situations. In 1950 the only kinds of tactical air support were "close" and "general," the latter used in the region beyond the range of the Army's heavy artillery.³⁶ However, *Joint Training Directive for Air-Ground Operations*, issued in September 1950, stated that "no degree of relative importance can be attached to the general tasks described in [interdiction] and [close air support]. . . . Each may assume a major role in a given situation."³⁷ This doctrinal change indicated that the Army was becoming more inclined to place CAS on an equal footing with interdiction, as the situation demanded.

Marine Corps View. Because the Marines' amphibious nature forced them to rely on CAS as a substitute for heavy artillery, they naturally advocated the preeminence of that air mission. Thus, they intended to use their air assets in close support of their frontline troops and had developed the personnel, equipment, and detailed integration to do so.³⁸

Given this stance, friction with the Air Force over this issue was almost inevitable. Both the Navy and Marine Corps believed that FEAF directed more sorties to interdiction than to CAS because

FEAF controlled the sortie apportionment process.³⁹ The Air Force responded that it followed air priorities established by the theater and ground commanders,⁴⁰ further declaring that Marine CAS as a substitute for artillery—although appropriate for amphibious landings—was not feasible for extended land operations. In FEAF's judgement, the Marines devoted far too many sorties to CAS, noting that requests from Marine divisions were four times higher than those from Army units.⁴¹ Furthermore, General Weyland, FEAF commander in 1953, argued that a much higher percentage of CAS sorties was flown in Korea than in the war in Germany (30 percent versus 10 percent).⁴² The Marines also complained about the Air Force's poor performance in CAS and the consequence of inadequate training and equipment, as well as an inefficient Army/Air Force system of air-ground control.

Air Force Training and Equipment for Close Air Support

The Air Force was not prepared to perform CAS in Korea because of its post-world war conversion to high-speed P-80 interceptors designed for theater nuclear defense. Its pilots had neither the training nor equipment to perform the closely integrated bombing of CAS.⁴³ Furthermore, the fact that Air Force jets were based in Japan meant that they had little time to spend over Korean targets, unlike carrier-based aircraft. These deficiencies became all too evident at the Pusan Perimeter.

However, when Air Force pilots switched back to P-51s, which many of them had flown in World War II, and when they began flying P-80s with long-range fuel tanks, they were able to acquit themselves well during the rest of the war.⁴⁴ Indeed, neither the official Army nor Marine Corps history of the Korean War makes distinctions between any of the services' ability to perform CAS after 1950.

Different Systems of Control

The Marine system of CAS control used a ground-based forward air controller (FAC) at battalion level who directed missions from orbiting aircraft that were dedicated to the Marine unit.⁴⁵ The Army/Air Force system used a ground FAC at regiment level and an airborne FAC over the battlefield to call in aircraft that were sitting alert at their airfields.⁴⁶ The alert aircraft could be scrambled to handle any number of different units.

The primary point of contention between the two systems was the lowest organizational level at which the ground FAC was located. The Marines insisted on the battalion level, arguing that FACs at brigade level were so out of touch with the battlefield that they were little more than air liaison officers. This being the case, Marines would be vulnerable to accidental bombing because an airborne FAC could not always distinguish friendly positions from enemy positions. Only by placing ground FACs far enough forward so that they would be sure of the position of friendly forces could one avoid incidents of fratricide.

Second, the Marine system of orbiting aircraft was able to respond quickly to the needs of ground troops—often in just five to 15 minutes. The Army/Air Force system, however, took “a minimum of 30 minutes and . . . sometimes . . . nearly four hours.”⁴⁷

Third, Marine ground forces trained with Marine aviators and did not operate as well with substitute players. For that reason, they wanted the 1st Marine Air Wing dedicated to the 1st Marine Division.

Furthermore, senior Army commanders expressed dissatisfaction with the Army/Air Force system, either directly or indirectly. For example, the commander of the 32d Infantry Division praised the effectiveness of the Marine system at the Pusan Perimeter,⁴⁸ while the commander of the 7th Infantry Division Artillery found the Air Force system at Inchon inferior to the one used by the Marines.⁴⁹ “In November 1950, Army Chief of Staff General Collins filed a formal criticism of close air-support operations with Air Force Chief of Staff

Hoyt Vandenberg."⁵⁰ Later, Maj Gen Edward M. Almond, commander of X Corps, became an advocate of the Marine system and fought to change the Army/Air Force system.

The commander in chief of Far East forces—as well as the JCS, Headquarters US Army, and Headquarters US Air Force—launched wartime evaluations of the two systems. In all cases, the boards of inquiry agreed that the Marines' use of on station air support was wasteful and that the Air Force could not possibly supply the number of ground FACs required to implement the Marine system across the whole Army. Conceding that the Marine system was appropriate for that service's unique amphibious mission, the boards nevertheless concluded that the system was not appropriate for large-scale use by the Army and Air Force.⁵¹

Furthermore, the boards concluded that the system of CAS advocated by FM 31-35 and the *Joint Training Directive for Air-Ground Operations* was still not operational in Korea⁵² because the services failed to provide the personnel and equipment needed for the detailed liaison structure.⁵³ Specifically, the Air Force never allocated the FACs, and the Army never provided the communication equipment.⁵⁴

Lessons Learned

For the Army, Navy, and Air Force, Korea reinforced many of the lessons those services had already learned in World War II—among them, the high priority of air superiority and the necessity of coordinating air components.⁵⁵ For the Marine Corps, however, its first encounter with the European model of centralized control produced lessons having considerably greater impact.

The Air Force believed that its ability to isolate the battlefield through interdiction had helped win the war, citing the reversals at Pusan in 1950 and the halt of the Chinese invasion in 1951.⁵⁶ Both the Army at Pusan and the Marine Corps at Inchon acknowledged that interdiction was essential to the ground battle.⁵⁷ Further, the Air Force's centralized direction of all air assets allowed it to switch back and forth between interdiction and CAS until the front stabilized.⁵⁸ In the CAS arena, "the USAF-Army system proved able to meet require-

ments laid upon it in Korea,"⁵⁹ thus vindicating the European-based doctrine of FM 100-20 and solidifying the new service's independence.⁶⁰

The Navy confirmed it could retain command of its carrier forces and still be effective in the land battle through a geographic split of air responsibilities. Its enthusiastic participation in the Eighth Army/Fifth Air Force joint operations center and FEAF joint targeting group enabled Task Force 77 participation and leadership in centrally controlled air power campaigns with Fifth Air Force and FEAF Bomber Command.⁶¹ Although the Navy cooperated with the Army/Air Force system of CAS, it criticized the requirement to clear sorties through the JOC as "overcentralization" because this made it "vulnerable both to enemy action and to communications saturation at times of peak activity."⁶²

Officially at least, the Army seemed pleased with air support in Korea because the amount of CAS had increased (over 200 percent since World War II) and had prevented the enemy from driving Army troops out of Korea.⁶³ Nevertheless, the Marine Corps system of CAS won over many Army converts.

The Marines came away from Korea very displeased with the way their air forces had been used: "Probably the most serious problem of all, from the Marine Corps point of view, was that during much of the Korean War Marine air-ground components, trained to work as a team, were to a large extent precluded from operating together."⁶⁴ Once again, Marine air was separated from the Marine divisions it was supposed to support.⁶⁵ As a result, the lessons learned by the Marines had a substantially greater impact on that service than did the lessons learned by the other services in Korea. First, Air Force command of air forces would lead to apportionment that favored interdiction over CAS.⁶⁶ Second, the Air Force was not serious about CAS compared to the Marines⁶⁷—witness the fact that Air Force funding, personnel, and training for CAS did not receive the same emphasis as it did in the Marine Corps.⁶⁸ Third, because of these two facts, the Marines believed that their divisions would suffer high casualties without Marine air support.⁶⁹ These lessons convinced the

Marines they should ensure that Marine air forces could not be separated from their ground forces.

Evolution of Joint Doctrine from World War II

Four observations about the above lessons from Korea have implications for the system of air control that would carry over to Vietnam. First, although FEAF had OPCON of Air Force and Marine air and "coordination control" of Navy air at the theater level, this did not help liaison at the Army/Air Force level in Korea. Because the span of CINCFE and FEAF command included defense of Japan as well as Korea, Air Force attention was divided. In Korea, even though Fifth Air Force and Eighth Army were collocated in Korea and were well coordinated (in accordance with the *Joint Training Directive for Air-Ground Operations*), the fact that Fifth Air Force never had tactical control of carrier air or strategic air hampered its ability to support the Army and Marine Corps land battle. The tightly coordinated air effort of the Navy and Air Force that evolved by the end of the war was a product of the harmonious relationship that existed between the commanders of those services in Korea. Unfortunately, this sense of harmony would not carry over to Vietnam.

Second, the centralized control of air power (fig. 16) was a decisive factor in most ground battles in Korea. Whether acting to delay the North Korean drive to Pusan, isolate the Inchon landing, or rescue X Corps from the Chosin Reservoir,⁷⁰ all air power was redirected to the tactical situation that needed immediate support. The Korean War provides possibly the best US case study in the flexible use of centralized air assets across a theater.⁷¹

Third, the consequence of shifting air power across a theater was that the Marines got less CAS than they wanted. In their view, FEAF's apportionment of air assets reflected the low priority that the Air Force assigned to CAS.⁷² While the Marines were used to World War II apportionments from a Navy task force commander, the Navy's priorities were different from those of the Air Force. For

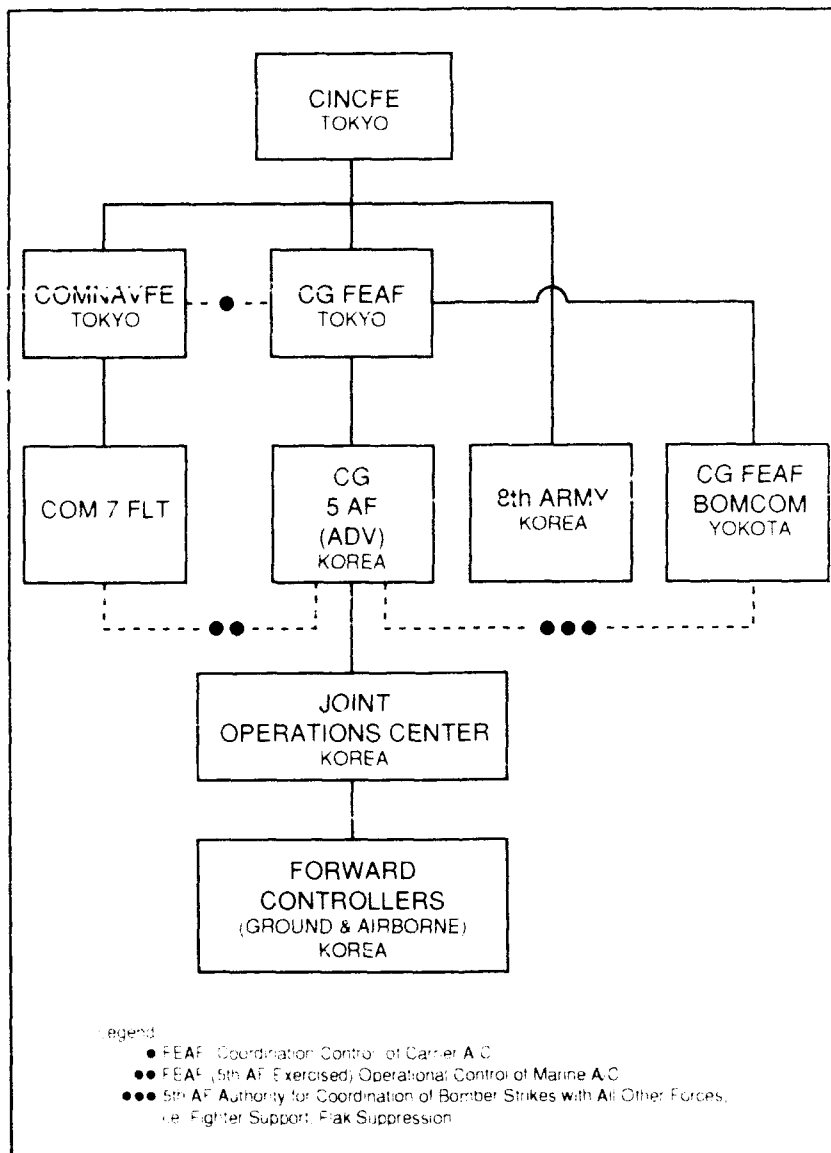


Figure 16. Control of Aircraft in Korea (From William W. Momyer, *Airpower in Three Wars* [Washington, D.C.: Department of the Air Force, 1978], 61)

Marines in Korea, the bottom line was that they wanted more CAS but could not get it.

Last, after the Korean War stagnated, Marine Corps CAS suffered the same kind of losses to AAA that the AAF had experienced in Europe. Stable front lines allowed the Chinese and North Koreans to bring in heavier AAA defenses and shoot down many airplanes performing CAS.⁷³ Although the total number of heavy flak and light guns in February 1953 "barely exceeded the numbers that the Germans deployed around some of their key targets late in World War II,"⁷⁴ US losses were far worse than those in the Pacific theater and approached European-theater levels. Nevertheless, the Marines accepted these losses as the cost of doing business, reaffirmed CAS as a top priority, and developed tactics for providing flak suppression for CAS aircraft.⁷⁵

Notes

1. Gen William W. Momyer, *Airpower in Three Wars* (Washington, D.C.: Department of the Air Force, 1978), 56. Chapter 2 discusses this subject in detail.

2. See chapter 2 for more information about command and control of Allied air forces.

3. Wesley Frank Craven and James Lea Cate, eds., *The Army Air Forces in World War II*, vol. 4, *The Pacific: Guadalcanal to Saipan, August 1942 to July 1944* (1950; new imprint, Washington, D.C.: Office of Air Force History, 1983), xiii, 19; and idem, vol. 5, *The Pacific: Matterhorn to Nagasaki, June 1944 to August 1945* (1953; new imprint, Washington, D.C.: Office of Air Force History, 1983), 676.

4. E. B. Potter, ed., *Sea Power: A Naval History*, 2d ed., rev. (Annapolis: Naval Institute Press, 1981), 290.

5. Ronald H. Spector, *Eagle against the Sun: The American War with Japan* (New York: Vintage Books, 1985), 145; *United States Army in World War II: The War in the Pacific*, vol. 10, *Strategy and Command: The First Two Years* by Louis Morton (Washington, D.C.: Office of the Chief of Military History, Department of the Army, 1962), 362-63; and Craven and Cate, vol. 5, 742.

6. Craven and Cate, vol. 5, 687.

7. Warren A. Trest, "The Legacy of Halfway Unification," *Air University Review* 37, no. 6 (September-October 1986): 65.

8. Robert Frank Futrell, *Ideas, Concepts, Doctrine: Basic Thinking in the United States Air Force*, vol. 1, 1907-1960 (Maxwell AFB, Ala.: Air University Press, December 1989), 196-97, 200.
9. *Ibid.*, 197-201.
10. Lt Col Phillip S. Meilinger, "The Admirals' Revolt of 1949: Lessons for Today," *Parameters*, September 1989, 84.
11. At the meeting at Key West on 11 March 1948, "the Joint Chiefs reached basic agreement that the Navy would proceed with the developments of weapons that it considered essential to its functions—including the 65,000-ton carrier [*United States*] and nuclear bombs that could be transported on naval aircraft—provided that the Navy would not develop a separate strategic air force." Given this understanding, the Navy looked upon the cancellation of the *United States* as a violation of the Key West agreement. Futrell, 198.
12. Meilinger, 91.
13. Col Thomas A. Cardwell III, *Command Structure for Theater Warfare: The Quest for Unity of Command* (Maxwell AFB, Ala.: Air University Press, September 1984), 15; James A. Field, Jr., *History of United States Naval Operations: Korea* (Washington, D.C.: Government Printing Office, 1962), 111; and Momyer, 57.
14. Field, 392-93; and Robert F. Futrell, *The United States Air Force in Korea, 1950-1953*, rev. ed. (Washington, D.C.: Office of Air Force History, 1983), 693.
15. Walter G. Hermes, *United States Army in the Korean War: Truce Tent and Fighting Front* (Washington, D.C.: Office of the Chief of Military History, Department of the Army, 1966), 362-65.
16. Momyer, 62.
17. Albert F. Simpson, "Tactical Air Doctrine: Tunisia and Korea," *Air University Quarterly Review* 4 (Summer 1951): 17.
18. *U.S. Marine Operations in Korea, 1950-1953*, vol. 5, *Operations in West Korea* by Pat Meid and James M. Yingling (Washington, D.C.: Historical Branch, G-3, Headquarters US Marine Corps, 1972), 488-89. Maj Gen Earle E. Partridge, Fifth Air Force commander, assigned 1st Marine Air Wing to X Corps for dedicated support after the Wonsan landing in East Korea. He did this in an attempt to solve communication and coordination difficulties caused when General MacArthur split the land component into Eighth Army and X Corps. Fifth Air Force remained collocated with Eighth Army.
19. Simpson, 18; Allan R. Millet, "Korea, 1950-1953," in *Case Studies in the Development of Close Air Support*, ed. Benjamin Franklin Cooling (Washington, D.C.: Office of Air Force History, 1990), 373; and *U.S. Marine Operations in Korea, 1950-1953*, vol. 3, *The Chosin Reservoir Campaign* by Lynn Montross and Nicholas A. Canzona (Washington, D.C.: Historical Branch, G-3, Headquarters US Marine Corps, 1957), 33.
20. Field, 111.

21. *Ibid.*, 112. Actually, the agreement between FEAF and NAVFE was set out at the beginning of the war. "Coordination for attacks south of 38 degrees was to lie with Fifth Air Force; attacks on Bomber Command targets required clearance from FEAF." Any targets north of 38 degrees belonged to Bomber Command (page 138).

22. No official definition of *coordination control* existed in 1950. Joint Pub 1-02, *Department of Defense Dictionary of Military and Associated Terms* (23 March 1994), defines *coordinating authority* as

a commander or individual assigned responsibility for coordinating specific functions or activities involving forces of two or more countries or commands, or two or more services or two or more forces of the same service. The commander or individual has the authority to require consultation between the agencies involved, but does not have the authority to compel agreement. In the event that essential agreement cannot be obtained, the matter shall be referred to the appointing authority. (Pages 93-94.)

23. Field, 393.

24. Cardwell, 15; and Momyer, 54. Momyer states that "FEAF and NAVFE came to an arrangement by mid-1952 which, in fact, recognized that FEAF was the controlling authority for all air operations" (page 59). This is probably not the Navy perception, however. The delegation of coordination control to FEAF never changed throughout the war. However, by 1952-1953 the Navy did start jointly planning all air activity with FEAF and Fifth Air Force through the JOC and participated in FEAF interdiction campaigns. To suggest that FEAF had achieved tasking authority ignores the fact that the Navy refused to fly some missions in western Korea and that the Navy itself originated the Cherokee close support program. In the end, it was the close personal friendship between Adm J. J. Clark (Seventh Fleet) and Lt Gen Glenn O. Barnes (Fifth Air Force) that led to a level of cooperation that looked like something more than coordination control. Dr Richard P. Hallion, *The Naval Air War in Korea* (Baltimore, Md.: The Nautical & Aviation Publishing Company of America, 1986), 132, 137-41.

25. Millett, 394.

26. This study uses the definitions of *CAS* and *interdiction* in the 1994 version of Joint Pub 1-02. However, the definitions are quite different in the 1953 version, which defines *CAS* as "air action against hostile ground targets which *are so close* [italics added] to friendly forces as to require detailed integration of each air mission with the fire and movement of these forces." The current sense of *interdiction* was not recorded in JCS Pub 1 until 1984. The 1953 version defined the verb *interdict* as meaning "to prevent or hinder, by any means, enemy use of an area or route."

27. FM 31-35, *Air-Ground Operations*, 13 August 1946, 14.

28. *Ibid.*, 12.

29. AFM 1-2, *United States Air Force Basic Doctrine*, March 1953, 16. This was the first manual of basic doctrine for the US Air Force; it became the now-familiar AFM 1-1 in 1971.

30. AFM 1-3, *Theater Air Operations*, 1 September 1953, 11.

31. Gen Otto P. Weyland, "The Air Campaign in Korea," *Air University Quarterly Review* 6, no. 3 (Fall 1953): 20; and Millett, 352.

32. Weyland, 26.

33. Millett, 351. Although one might suspect that Millett's article reflects an Air Force view of CAS in Korea since it is part of a special study by the Office of Air Force History, this is not the case. Instead, Millett's work strongly reflects his Marine background and earlier work - *Semper Fidelis: The History of the United States Marine Corps*, rev. and expanded ed. (New York: Free Press, 1991).

34. Field, 138.

35. Millett, 351.

36. The 1953 version of JCS Pub 1 defines *tactical air support* in general as "air operations in gaining and maintaining air superiority, as well as interdiction activities," a definition which is the precursor of the current *interdiction*.

37. *Joint Training Directive for Air Ground Operations*, 1 September 1950, 2-3. Because this manual was signed by commanders at the Office of Army Field Forces and at Headquarters Tactical Air Command, it represents a significant turning point in US air doctrine on the priority of CAS.

38. Millett, 350-51.

39. The modern term *apportionment* is used here for purposes of clarity.

40. Billy C. Mossman, *United States Army in the Korean War: Ebb and Flow, November 1950-July 1951* (Washington, D.C.: Center of Military History, US Army, 1990), 48.

41. Weyland, 26. The Marines substantiate this heavy usage of CAS throughout their history of the Korean War. For example, from 26 October to 11 December 1951, X Corps received the following CAS sorties: "468 for 1st Marine Division, 8 for 3d Infantry Division, 56 for 7th Infantry Division, and 67 for ROKs [Republic of Korea (troops)]." Montross and Canzona, 349.

42. Weyland, 26.

43. Millett, 361-62.

44. Richard H. Kohn and Joseph P. Harahan, eds., *Air Interdiction in World War II, Korea, and Vietnam: An Interview with Earle E. Partridge, Jacob E. Smart, and John W. Vogt, Jr.* (Washington, D.C.: Office of Air Force History, 1986), 41-45.

45. Montross and Canzona, vol. 1, *The Pusan Perimeter* (Washington, D.C.: Historical Branch, G-3, Headquarters US Marine Corps, 1954), 141.

46. *United States Army in the Korean War*, vol. 1, *South to the Naktong, North to the Yalu (June-November 1950)* by Roy E. Appleman (Washington, D.C.: Office of the Chief of Military History, Department of the Army, 1961), 377.

47. Meid and Yingling, 516.

48. Montross and Canzona, vol. 1, 243.

49. Montross and Canzona, vol. 2, *The Inchon-Seoul Operation* (Washington, D.C.: Historical Branch, G-3, Headquarters US Marine Corps, 1955), 295, 335-37.

50. Millett, 371.
51. Ibid., 371-73; and Hermes, 326.
52. Millett, 372, 376.
53. Ibid., 349.
54. Ibid., 363.
55. Ibid., 394.
56. Weyland, 10, 21.
57. Appleman, 123, and Montross and Canzona, vol. 2, 298.
58. Weyland, 11, and Appleman, 257.
59. Futrell, *Korea*, 706.
60. Ibid., 702.
61. Monyer, 58-59; and Field, 393.
62. Field, 393.
63. Appleman, 477. *This increase in CAS caused the Army to expect even more in the next war.*
64. Meid and Yingling, 512-13.
65. Millett, 381. For example, in the final month of the war, "1st MAW [Marine Air Wing] planes flew 1,500 CAS sorties for the 19 different EUSAK [Fifth United States Army in Korea] frontline divisions." However, "by the last six months of the war the bulk of all CAS missions received by the division were flown by 1st MAW aircraft, in contrast to earlier periods when a third or half of the division's sorties were Marine flown." Meid and Yingling, 493, 516.
66. Millett, 381, and Meid and Yingling, 514.
67. Millett, 380, 392.
68. Ibid., 395.
69. Ibid., 380; and Meid and Yingling, 514. The basis for this accusation is that without the battalion-level ground FAC to keep track of friendly ground positions, ground forces will suffer more accidental bombings than usual. The Marines believed that the airborne FAC was too out of touch with the ground battle to be able to differentiate between friend and foe.
70. Fifth Air Force dedicated all air assets to support the Chosin withdrawal. Without assistance from Air Force cargo planes—including the delivery of bridge spans—the Marines would not have gotten out intact.
71. In my opinion, the Israeli Defense Forces' employment of aircraft in the 1967 Arab-Israeli War is the best use of air power across a theater.
72. Millett, 397.
73. Ibid., 384.
74. Kenneth P. Werrell, *Archie, Flak, AAA, and SAM: A Short Operational History of Ground-Based Air Defense* (Maxwell AFB, Ala.: Air University Press, December 1988), 74.
75. Meid and Yingling, 69-73.

Chapter 5

Vietnam: Unraveling of Centralized Control

In most respects, the Air Force's concept of a "single manager for air" lost considerable ground during the Vietnam War (fig. 17). In the Korean War, the FEAF theater air commander had operational control of all Army, Air Force, and Marine fixed-wing aircraft, as well as coordination control over Navy carrier air,¹ but in Vietnam each service controlled its own air forces. That is, the commander in chief, Pacific Command (CINCPAC)—a Navy admiral—retained control of Task Force 77 aircraft; the Marines had de facto control of their air assets even though Seventh Air Force had official control; the Army fought for and won permanent control of its helicopters despite losing its cargo aircraft in the trade; and even the Air Force split its command lines between Pacific Air Forces (PACAF) and Strategic Air Command (SAC) aircraft. Given this separatist attitude toward the control of air power, it is not surprising that the war produced few joint lessons.

The development of military doctrine from Korea through Vietnam is a story of service parochialism and bureaucratic models of organizational behavior, both of which affected the doctrine of centralized control of air power. Although the performance and priority of CAS dominated tests of this doctrine during the Korean War, in Vietnam the CAS controversy gave way to the furor over who would control air power.² After having tried the Air Force's single-manager concept in Korea, the services declined to give the Air Force another opportunity to take away their air power assets. This chapter reviews prewar developments that precipitated this attitude, examines command and control of both theater forces and air forces in Vietnam, and summarizes each service's perception of lessons learned in Vietnam.

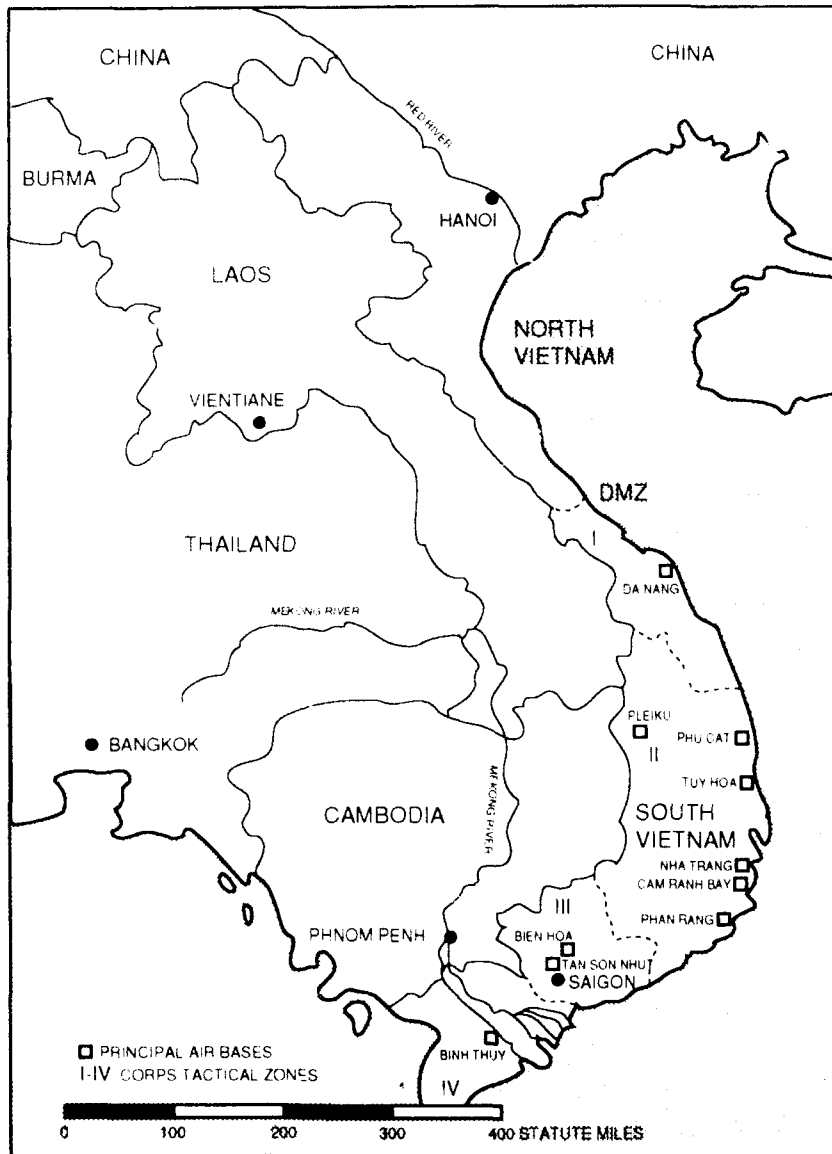


Figure 17. Southeast Asia (From John J. Sbrega, "Southeast Asia," in *Case Studies in the Development of Close Air Support*, ed. Benjamin Franklin Cooling [Washington, D.C.: Office of Air Force History, 1990], 412)

Developments in Air Power Doctrine, 1953-65

When President Dwight D. Eisenhower announced that massive retaliation would be his strategy for national defense, the Air Force began to develop weapons for general and tactical nuclear war.³ According to this strategy, "success in limited war is contingent upon maintaining a superior general war capability."⁴ Consequently, the Air Force designed its tactical fighters to deliver nuclear weapons, and Air Force generals even discussed the possibility of eliminating all conventional weapons from the service's inventory.⁵ In 1955 Exercise Sagebrush tested the atomic-war tactics of Tactical Air Command (TAC) and Continental Army Command (CONARC) across a 13-state region⁶ and thus demonstrated the dominance of nuclear weapons. Maj Gen John D. Stevenson's report from Headquarters TAC observed that "the rapidity of successful attack and the destruction wrought by atomic weapons quickly outmoded the time schedule for conventional warfare."⁷ Because massive numbers of tactical nuclear weapons destroyed both sides within days, umpires decided "to abandon maneuver realism and go into training status."⁸ Only at the end of the exercise did CAS receive any attention. In view of these results, the Air Force understandably ignored air-ground support in limited war,⁹ a decision the Army found objectionable.¹⁰

Doctrine of Close Air Support

The Army's growing concern about Air Force CAS and the Air Force's challenge to the Army's use of helicopters as a "second tactical air force" led the Army to convene the Howze board in 1962.¹¹ This board justified the Army's creation of a helicopter-assault division—partly by attacking the Air Force's air-ground system and its lack of support for the Army—and advocated a return to organic air support. The Air Force responded with the Disosway board,¹² which reaffirmed the necessity for centralized control of air power. Three years of controversy ended in April 1965 when Air Force Chief of Staff Gen John P. McConnell and Army Chief of Staff Gen Harold K.

Johnson approved a "Concept for Improved Joint Air-Ground Coordination,"¹³ according to which the Air Force conceded the apportionment authority of the air component commander (ACC).¹⁴ Instead, the ACC would have the daily task of recommending numbers for the theater commander, who would now make the apportionment decision¹⁵ and thereby have the final say in determining whether air sorties went to counterair, interdiction, or CAS. This concession was a response, at least in part, to Army and Marine complaints during Korea that the Air Force pursued interdiction to the detriment of CAS. Although, technically, the theater commander always has apportionment authority, the agreement between the service chiefs meant that the Air Force now ensured that a certain percentage of sorties would be devoted to each mission.

Thus, with the onset of major ground action in Vietnam, the Air Force and Army had hammered out the Joint Air-Ground Operations System (JAGOS), which Gen William C. Westmoreland would implement in May 1966.¹⁶ This was not joint doctrine, however, because the Marines and Navy had their own CAS systems. In the meantime, helicopters were assuming more responsibility for CAS.

Development of Army Helicopters

The Marines first used helicopters for air transport in Korea; after that war, the Army began testing the feasibility of transporting assault forces by helicopter.¹⁷ The Air Force strongly resisted these tests,¹⁸ as did traditional elements of the Army,¹⁹ and they became the subject of high-level debates between the Howze and Disosway boards.²⁰ Although Secretary of Defense Robert S. McNamara officially incorporated the 11th Air Assault Division (renamed the 1st Cavalry Division, Airmobile) into the Army in 1965,²¹ his decision did little to settle the disagreement between the Army and the Air Force. Again, the compromise worked out by Generals McConnell and Johnson in April 1966 had a hand in quelling this dispute by assigning responsibility for fixed-winged transports to the Air Force and responsibility for all helicopters—except those used for search and rescue—to the Army.²² As part of the agreement, the Army sur-

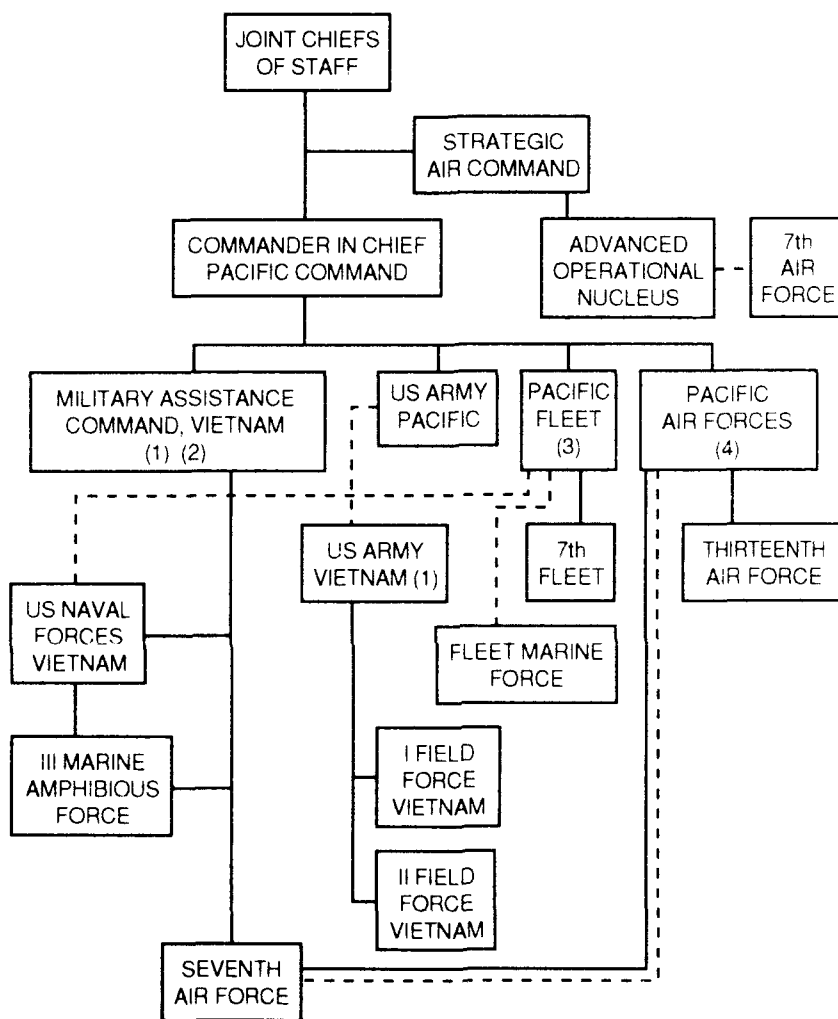
rendered control of its CV-2 Caribou and CV-7 Buffalo transports, and the Air Force relinquished current and future claims on rotary-wing aircraft. The Air Force, however, thought it was conceding only an airlift mission, not foreseeing the helicopter gunship (e.g., the AH-1 Cobra) and its role in CAS as a substitute for Air Force fighters. Indeed, in Vietnam all helicopters were armed, and gunships became prevalent.

Command and Control of Theater Forces in Vietnam

As all eyes focused on Europe and the Warsaw Pact threat, the conflict in Vietnam continued to rage out of control. Although the US commitment of forces was at first small and covert, it continued to increase until the president sent ground troops in 1965 to stop the imminent collapse of South Vietnam. This slow buildup, as well as the insurgent nature of the war and the problems arising from host-nation requirements, created conflicting organizational structures. Consequently, the system of command in Vietnam (fig. 18) was not the hierarchical one used in World War II and Korea but an autonomous application of forces by the various military services.

CINCPAC—the theater commander—and his Navy and Air Force component commanders were located in Hawaii. Because of the potential threat from China, CINCPAC preferred to retain control of the US Pacific Fleet (PACFLT) and PACAF for theaterwide action,²³ rather than transfer control to a command in Vietnam.²⁴ The latter, a subunified command known as Military Assistance Command, Vietnam (MACV) was largely Army-controlled, -staffed, and -oriented, due to the ground nature of the war.²⁵ Just as CINCPAC retained control of carrier aircraft at PACFLT, PACAF chose to transfer OP-CON of the Thailand-based Thirteenth Air Force aircraft to 2d Air Division rather than assign its theater air forces to MACV.²⁶ Thus, the three service components existed at two different command levels.

AIR POWER'S GORDIAN KNOT



- (1) Commander MACV also Commander US Army Vietnam
 (2) MACV had responsibility for Route Package I air war in North Vietnam
 (3) PACFLT had responsibility for Route Packages II, III, IV and VIB air war in North Vietnam
 (4) PACAF had responsibility for Route Packages V and VIA air war in North Vietnam and Laos air operations

- - - Administrative
 — Operational

Figure 18. Command Structure in the Vietnam War (From Lt Col John J. Lane, Jr., "Command and Control and Communications Structures in Southeast Asia," Report no. RA007-80 [Maxwell AFB, Ala.: Air War College, 1981], 111)

Since the commander, US Military Assistance Command, Vietnam (COMUSMACV) was part of the US country team support to Vietnam, he answered to the US ambassador to South Vietnam and to the US ambassador to Thailand. For normal operations, though, the ambassadors concentrated on political matters and left military affairs to the services and their chains of command. Gen William C. Westmoreland, COMUSMACV, summed up the command arrangements as follows:

Creating a unified command for all of Southeast Asia would have gone a long way toward mitigating the unprecedented centralization of authority in Washington. . . . Instead of five 'commanders'—CINCPAC, COMUSMACV, and the American ambassadors to Thailand, Laos, and South Vietnam—there would have been one man directly answerable to the President on everything. Although that kind of organization might have created ripples within the service-conscious Joint Chiefs of Staff, the Joint Chiefs traditionally fall in line when the Commander in Chief speaks. Such an arrangement would have eliminated the problem of co-ordination between the air and ground wars that was inevitable with CINCPAC managing one, MACV the other.²⁷

Below the theater level, MACV was also jointly structured, having air, land, and sea components. Initially, the air component was 2d Air Division, which later became Seventh Air Force. A land component existed, but—as in Korea—the commander was still General Westmoreland. At first, the Marines directed the sea component, but the Navy took charge with the commencement of riverine operations.²⁸ The Marines then began reporting directly to COMUSMACV as a separate service component.²⁹

Command and Control of Air Forces in Vietnam

Because of the complicated command structure in Vietnam and the surrounding countries, the Air Force had a difficult time creating a single manager for air. Indeed, even the Air Force failed to observe unity of command with its own forces. Ultimately, the air war was directed at two levels: Pacific Command (PACOM) controlled the

interdiction effort, and the dual-hatted commander of Seventh Air Force—also the MACV deputy commander for air operations—controlled air support for MACV.³⁰

Air Force

Seventh Air Force commanded Air Force assets in South Vietnam, deployed TAC units in Thailand, and had OPCON of Thailand-deployed Thirteenth Air Force units from the Philippines (fig. 19). As mentioned earlier, the latter units were not assigned to Seventh Air

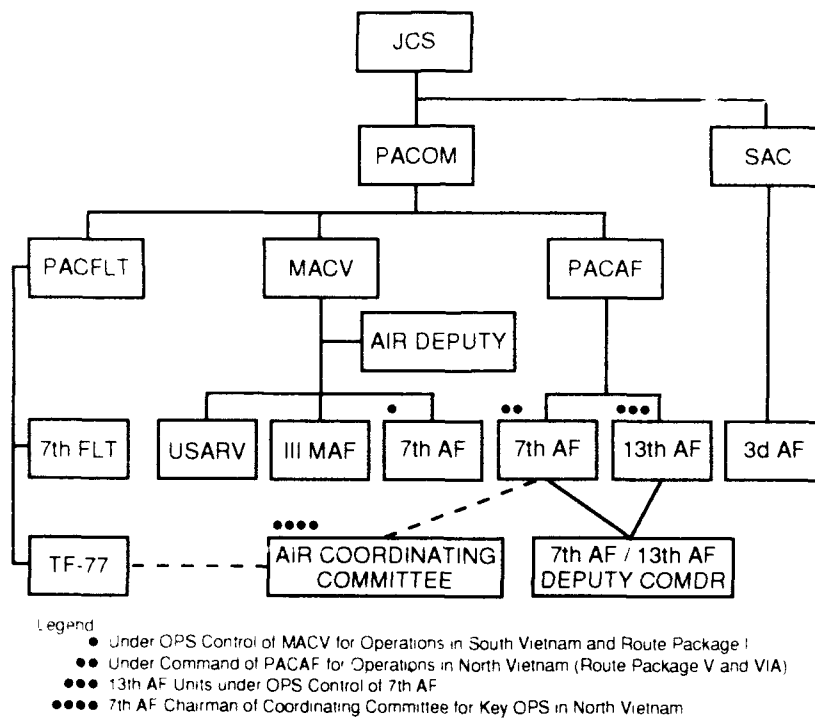


Figure 19. Air Command Structure in Vietnam, 1966–72 (From William W. Momyer, *Airpower in Three Wars* [Washington, D.C.: Department of the Air Force, 1978], 84)

Force so that PACAF could easily recall them if necessary.³¹ Although SAC—which retained control of its B-52s throughout the war—attached an advanced echelon to MACV headquarters (not Seventh Air Force) through which COMUSMACV nominated targets, the coordination level was legally between CINCPAC and CINCSAC at the level of the Joint Chiefs of Staff.³²

Navy

The Navy's PACFLT in Hawaii retained control of Task Force 77 throughout the war, sending most Navy air missions to North Vietnam for interdiction.³³ If Navy planes were diverted to South Vietnam, they came under control of Seventh Air Force and its tactical air operations center.³⁴ Due to range limitations and cyclic carrier operations, however, Navy planes were more suited to interdiction than to on-call CAS.³⁵

CINCPAC, who controlled the interdiction campaign, decided which missions went to PACFLT and which to PACAF.³⁶ These theater components then passed down missions to Task Force 77 and Seventh Air Force, respectively, for planning.³⁷ CINCPACAF had coordination authority, "with the tacit understanding that [such authority] would be further delegated to the Commander of the 2d Air Division [later, Seventh Air Force] located in South Vietnam."³⁸

Airspace deconfliction over Vietnam became a serious problem for air planners. Coincident with the arrival of most of the air forces and carriers in 1965 and with preparations for the first Rolling Thunder mission, planners decided to divide North Vietnam into seven areas (fig. 20). The Navy would operate in route packages 2, 3, 4, and 6b, and the Air Force in route packages 1, 5, and 6a. This division served two purposes: (1) it ensured that targets assigned to carriers would be in range of carrier aircraft³⁹ and (2) it provided for deconfliction between Air Force and Navy flights. Although the Navy liked this system because it obviated the need for coordination, the Air Force had serious reservations. For example, Gen William W. Momyer, commander of Seventh Air Force, believed that the Navy could not

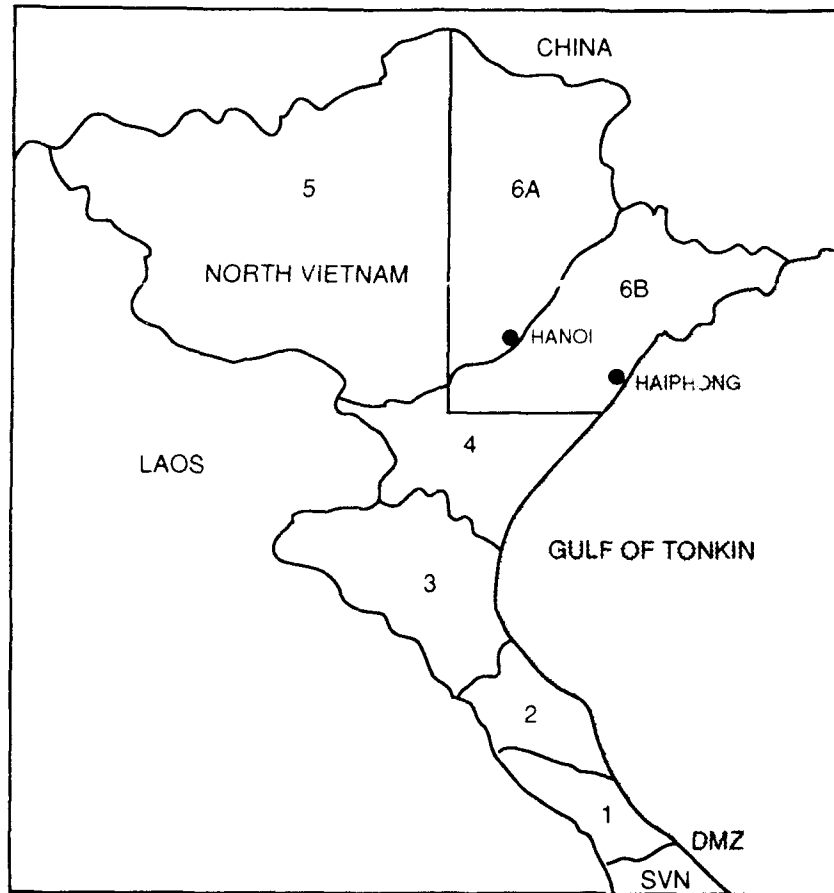


Figure 20. Rolling Thunder Route Packages (From John Schlight, *The War in South Vietnam: The Years of the Offensive, 1965–1968* [Washington, D.C.: Office of Air Force History, 1988], 204)

cover its huge region in 24-hour operations⁴⁰ and that the assignment of distinct areas of responsibility would prevent air power from flexibly concentrating against priority targets.⁴¹ However, General Westmoreland reported that “in an emergency and upon my request, CINCPAC would divert all necessary air and naval capabilities to priority targets selected by me.”⁴² Indeed, early in the 1968 Tet offen-

sive, COMUSMACV obtained from CINCPAC temporary authority to control Task Force 77 sorties committed to MACV through Seventh Air Force.⁴³

Army

Entering Vietnam with its new 1st Cavalry Division (Airmobile), the Army proceeded to double the number of helicopters in-country by the end of the war and retain control of them by virtue of the agreement between Generals McConnell and Johnson, discussed earlier. Further, MACV Directive 95-4, *U.S. Air Operations in RVN [Republic of Vietnam]* (28 June 1966), excluded the MACV deputy commander for air from controlling these helicopters. According to General Momyer, however,

this absence of control was a problem throughout the war, for the large number of aircraft sorties and the absolute necessity to counter enemy ground fire during helicopter assaults demanded unified planning and control. In fact the demands for air support are greater during a helicopter assault than for a traditional airborne operation. In an airborne assault the force is traveling at a much higher penetration speed with minimum exposure, and it has a higher degree of survivability compared to a helicopter assault.⁴⁴

Although Seventh Air Force commanders repeatedly requested control over helicopters, COMUSMACV did not grant them such authority; thus, MACV Directive 95-4 remained unaltered.⁴⁵

Marine Corps

The Marines entered Vietnam with total control over their Marine Air Group (MAG),⁴⁶ which had grown to include fixed-wing and rotary-wing aircraft, as well as batteries of Hawk surface-to-air missiles and an air-and-surface control system.⁴⁷ The Marines operated these elements as an integral unit and did not want their air assets stripped away, as was the case in Korea.⁴⁸ MACV Directive 95-4 supported this position:

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Marine Corps aviation resources are organic to III MAF [Marine Amphibious Force] and are commanded and directed in support of tactical operations as designated by the Commanding General III MAF. The Marine Corps tactical air control system will exercise positive control over all USMC aircraft in support of Marine Corps operations and over other aircraft as may be in support of such operations. In the event COMUSMACV declares a major emergency, 2nd Air Division [later, Seventh Air Force] will assume operational control of certain air resources designated by COMUSMACV.⁴⁹

The Marine Corps retained control over the 1st Marine Air Wing until the 1968 Tet offensive,⁵⁰ at which time General Westmoreland decided to reinforce the III MAF with heavier Army forces. This mixture of Marine and Army divisions and their CAS systems in the same I Corps region led to much confusion and accusations of non-support.⁵¹ Westmoreland decided that a "major emergency" had arisen and transferred tasking authority of Marine air to Seventh Air Force,⁵² although this did not include Marine transport and helicopters.⁵³ Lt Gen Keith B. McCutcheon, commanding general of 1st Marine Air Wing from 1965 to 1966 and of III MAF in 1970, acknowledged that

there is no doubt about whether single management was an overall improvement as far as MACV as a whole was concerned. It was. And there is no denying the fact that, when three Army divisions were assigned to I Corps and interspersed between the two Marine divisions, a higher order of coordination and cooperation was required than previously.⁵⁴

General Momyer, Seventh Air Force commander, declared that he now had control over Marine air, although the revised MACV directive transferred only "mission direction," which

was . . . the authority delegated to one commander (i.e., Deputy COMUSMACV for Air) to assign specific air tasks to another commander (i.e., [commanding general] III Marine Amphibious Force) on a periodic basis as implementation of a basic mission previously assigned by a superior commander (COMUSMACV).⁵⁵

Momyer interpreted this to mean operational control;⁵⁶ Westmoreland called it operational authority.⁵⁷

Although Seventh Air Force assumed mission direction of Marine air through the deputy COMUSMACV for air, the Marines retained de facto control. That is, by implementing the new directive, the Marines agreed to provide sorties to Seventh Air Force at a sortie rate of 1.0.⁵⁸ Since this was below the sortie rate of 1.5 the Marines normally flew, they had a surplus of sorties they could use as they pleased.⁵⁹ Additionally, the lion's share of the 1.0 sorties sent to Seventh Air Force came back to the Marines through their own direct air support center (DASC).⁶⁰ Therefore, although on paper the Marines lost control of their air assets, in reality they had the same planes, sorties, and control system as before.⁶¹ This system remained in effect until the Marines withdrew from Vietnam.

Lessons Learned

Overall, lessons in command and control took a back seat to the military's charges of extensive political meddling by Washington in tactical matters.⁶² Further, Vietnam was a war the United States was neither equipped nor trained to fight, and the pace of the war was so nonthreatening and limited that its lessons were overshadowed by those of Korea and World War II. However, each service did reinforce its perspectives on the use of air power.

Air Force

The Air Force was convinced that Vietnam vindicated the concept of centralized control of air power.⁶³ In retrospect, however, the war should have proved to the Air Force that centralized control at three different command levels (strategic, Pacific, and Southeast Asia) could not possibly work. General Momyer was frustrated because the theater commanders, CINCPAC and COMUSMACV, had not supported the authority of the air component commander to control (i.e., coordinate for the Navy) all air forces, as General MacArthur had done in Korea.⁶⁴ Momyer wrote that "coordinating authority is simply inadequate when operations must be changed rapidly and

when intricate details must be quickly resolved."⁶⁵ Unfortunately, the fact that the Air Force let SAC's B-52s remain outside the ACC's control⁶⁶ and the fact that PACAF maneuvered to keep Thirteenth Air Force away from MACV did not help convince the other services that the Air Force was serious about an ACC.⁶⁷

Despite the proviso in MACV Directive 95-4 that removed control of Army helicopter and Marine air from the ACC, the directive turned out to work to the Air Force's advantage. As we have seen, General Westmoreland used this document to order that Seventh Air Force assume permanent mission direction of Marine air from COMUSMACV and temporary tasking authority from CINCPAC over a fixed number of Task Force 77 sorties.⁶⁸ Airmen could now argue that MACV Directive 95-4 acknowledged the principle of single management of air forces because it invoked functional unity of command in a worst-case scenario.⁶⁹

Despite some success in centralizing control over Marine fixed-wing aircraft, implementation of the route-package concept caused the Air Force to lose considerable ground to the Navy by denying air power its ability to concentrate on any region of the battle.⁷⁰ This is exactly the issue the AAF fought against in North Africa, where air power was controlled at corps level. In Vietnam, route packaging split air power into "penny packets" and thereby diluted its impact.

The Air Force was pleased with its performance in CAS, averaging a 20-minute response on air diverts for CAS and a 40-minute response for immediate CAS.⁷¹

In 1966, the Army Chief of Staff, General Wheeler, said Army officers (some of whom were in their third war) told him that the close air support they received in South Vietnam was better in quality, quantity, and responsiveness than ever before. Westmoreland, at the 1967 Guam Conference, described the close air support in-country as "the finest any Army could hope to get."⁷²

However, a number of people voiced their concern over the extensive use of CAS. For example, from April 1965 to March 1973, 45 percent of all attack missions in North Vietnam, South Vietnam, and Laos

were for CAS or direct air support (DAS).⁷³ General Momyer commented that "the significant lesson from Vietnam is the unrealism on the amount of close air support any given ground force commander received regardless of need."⁷⁴ Adm U. S. Grant Sharp, CINCPAC, even thought that COMUSMACV's heavy use of CAS was a misuse of air power.⁷⁵

Navy

The Navy was pleased with Vietnam's preservation of the status quo. That is, the Navy maintained control of its carriers and aircraft throughout the war and even helped create the route package targeting system, which required no coordination with the other services. This meant that carriers were not constrained by their cyclic operations and could launch strikes according to mission tasking.

Army

The Army was generally pleased with the Air Force's CAS performance, probably because of the abundance of CAS, as mentioned earlier. As in Korea, there were few differences between Air Force and Marine execution of CAS by the end of the war, although complaints still arose over the fact that the Air Force's centralized tactical air control center (TACC) did not perform as well as the Marine system in I Corps. The Air Force contended that its hands were tied because it had to train the Vietnamese Air Force (VNAF) and the Army of the Republic of Vietnam (ARVN) to use the TACC; however, the Army's helicopter gunships compensated for this shortfall.

The Army created a vast fleet of gunships and armed all of its transport helicopters so that they could provide immediate suppressing fire.⁷⁶ "The Army felt that armed helicopters complemented Air Force tactical air power by providing an additional element of firepower between Air Force close air support and Army artillery."⁷⁷ On the other hand, an Air Force briefing paper of 1965 maintained that "[Army] overenthusiasm may result in the substitution of armed heli-

copters for more survivable tactical fighters with a consequent loss in overall combat power."⁷⁸ A congressional subcommittee, however, observed that the damage had already been done in its comment that "it is obvious to the most casual observer that the Army's armed helicopters have, in fact, been heavily relied upon to provide what is essentially close air support for friendly forces on the ground."⁷⁹ Similarly, General McCutcheon, commander of III MAF, pointed out that the Army expanded its fleet of helicopter gunships only to make up for the absence of fixed-wing attack aircraft.⁸⁰ The Army was also enthusiastic about the helicopter's ability to operate "in weather severe enough to ground the fixed-wing fighters."⁸¹ By retaining control of helicopters throughout the war, the Army established these aircraft as an organic asset. They have yet to come under Air Force control.

Marine Corps

Despite Air Force claims, the Marine Corps actually gained ground in its struggle to keep Marine air and ground forces together and established itself as the fourth component of a unified command.⁸² Further, although the Marines did relinquish some degree of control to Seventh Air Force, they released only sorties—not aircraft—to the air component commander. And, as we have seen, since most of their sorties came back to them through their own DASC, the Marines really operated as an integrated unit. Consequently, the Marines believe that CAS worked well for them in Vietnam because they "controlled" their own air—even though they had to scheme to do so.⁸³

Theater Control versus Tactical Control

Despite these expressions of satisfaction from the services, a basic question remained unanswered at the end of the war: Should air power be assigned to the tactical ground commander, or should the theater commander shift air forces to meet theaterwide needs?

On the one hand, Marines argued that the Air Force was not taking care of Army needs; on the other hand, the Army and Air Force thought that the Marines had too much organic air power. For instance, Maj Gen Norman J. Anderson, commander of the 1st Marine Air Wing in 1968, pointed to the Air Force as the culprit in the Marines' loss of aviation to the Army during the Tet offensive: "The overall ground commander will act when he is persuaded that his Air Force counterpart is doing less than the optimum in direct support of his troops."⁸⁴ General Westmoreland, however, saw things differently: "With an entire Marine Air Wing in support of each Marine division, Marine ground troops got more support than the Air Force could provide Army units, and Marine aircraft often were capable of doing more."⁸⁵ Evidently, one commander's flexibility is another's poor planning.

General Momyer summed up the controversy in doctrinal terms: "In short, airpower can win battles, or it can win wars. All commanders since Pyrrhus have been tempted at one time or another to confuse the two, but few distinctions in war are more important."⁸⁶ Resolution of this dilemma did not occur in Vietnam and remains unresolved today. For the joint force air component commander, it is a fundamental stumbling block—a veritable Gordian knot.

In sum, the lessons produced by the Vietnam War were service specific. The Air Force still pressed for one unified command structure and one air component commander. The Navy believed that the solution to its coordination problems lay in the route-package system of targeting. The Marines sought to keep the Marine Amphibious Force together, as it had done in the war. Last, the Army discovered that helicopters could give it the type of dedicated fire support that it wanted from Air Force CAS—but without the hassles.

Notes

1. As explained in chapter 4, the level of coordination was very high. General Momyer went so far as to state that FEAF tasked Task Force 77 directly.
2. Several contentious issues from Korea were resolved by 1965. The Air Force would follow the Marine Corps system and provide ground forward air controllers

(FAC) down to the battalion level (although FACs returned to brigade level in March 1966). Because of the jungle terrain and the need for better situational awareness, the Marine Corps pulled one of its two ground FACs from battalion level to become airborne FACs. The Air Force began diverting airborne aircraft to achieve faster CAS response time, a system that was almost as fast as Marine on-orbit support. During the war, both services had better CAS platforms, such as the A-7 and AC-130. John Schlight, *The War in South Vietnam: The Years of the Offensive, 1965-1968* (Washington, D.C.: Office of Air Force History, 1988), 130-31.

3. John J. Sbrega, "Southeast Asia," in *Case Studies in the Development of Close Air Support*, ed. Benjamin Franklin Cooling (Washington, D.C.: Office of Air Force History, 1990), 411.

4. Quoted in Robert Frank Futrell, *Ideas, Concepts, Doctrine: Basic Thinking in the United States Air Force*, vol. 2, 1961-1984 (Maxwell AFB, Ala.: Air University Press, December 1989), 57.

5. Futrell, vol. 1, 1907-1960 (Maxwell AFB, Ala.: Air University Press, December 1989), 461-62.

6. Maj Gen John D. Stevenson, "Exercise Sagebrush: Massive Air-Ground Lesson in Atomic Warfare," *Air University Quarterly Review* 8, no. 4 (Fall 1956): 15.

7. *Ibid.*, 32.

8. *Ibid.*

9. In 1961 Secretary of Defense Robert S. McNamara was asked to define the term *limited war* before the House Subcommittee on Appropriations. His response was, "By 'limited' war we simply mean war that is carried on, for the most part, with nonnuclear weapons." Futrell, vol. 2, 31.

10. Part of General Stevenson's report on Exercise Sagebrush substantiated the Army's view: "Present air-ground doctrine is inadequate in a number of aspects. It ties a tactical air force to the support of a field army, denying the Air Force one of its most valuable assets: flexibility." Stevenson, 35-36.

11. Lt Gen Hamilton H. Howze chaired this board, formally known as the Army Tactical Mobility Requirements Board. Sbrega, 415.

12. Lt Gen Gabriel P. Disosway chaired this board, formally known as the Tactical Air Support Requirements Board. *Ibid.*

13. Futrell, vol. 2, 300. This agreement finalized procedures that had already been tested by US Strike Command and partially implemented in Vietnam by General Westmoreland. See Sbrega, 428-29; and Maj Robert I. Weber, "Close Air Support in the Carolinas," *Air University Review* 15, no. 2 (January-February 1964): 64-69.

14. In addition, the Air Force agreed to supply FACs down to the battalion level. At the same time, though, the Army relinquished approval of immediate air requests at each level between the tactical air control party (TACP) and the direct air support center. Instead, intermediate-level TACPs would monitor the Air Force request

network and negate requests if they disapproved of them or had other fire-support resources available. This significantly sped up CAS response times and created a system that was very similar to the Marine Corps's. Futrell, vol. 2, 300-301; and Sbrega, 428-29.

15. Sbrega, 428-29; and Futrell, vol. 2, 300-301.
16. Sbrega, 433.
17. Futrell, vol. 2, 177-92.
18. According to Stevenson, during Exercise Sagebrush in 1955.

direction was also received from the Secretary of the Air Force regarding the use of the Army helicopters in the testing of Skycav. The Secretary directed that the maneuver director permit this test, even though he agreed with the position and principles upon which the maneuver director had based his prior refusal. (Page 35)

See also Schligh, 61-62.

19. Shelby L. Stanton, *Anatomy of a Division: The First Cav in Vietnam* (New York: Warner Books, 1987), 33.

20. Airlift was at the center of the controversy. For example, tests in 1964 pitted the 11th Air Assault Division against another division flown in by Air Force transport. Although poor weather made the helicopters look good, they had a high accident rate. Ibid., 32-33.

21. Ibid., 36.

22. Futrell (vol. 2) notes that the Air Force was

responsible for intratheater fixed-wing tactical transports, with the provision that Caribous and C-123s could be attached to subordinate field army echelons as thought necessary by joint/unified commanders. The Army became responsible for all helicopter support for intratheater movement, fire support, and supply and resupply of Army forces and Air Force tactical air control elements in the field. The Air Force became responsible for rotary-wing aircraft for search and rescue, administrative, and other limited functions. (Page 313)

23. Adm U. S. Grant Sharp, "Report on Air and Naval Campaigns against North Vietnam and Pacific Command-Wide Support of the War, June 1964-July 1968," in *Report on the War in Vietnam (as of 30 June 1968)* (Washington, D.C.: Government Printing Office, 1969), 20.

24. Gen William W. Momyer, *Airpower in Three Wars* (Washington, D.C.: Department of the Air Force, 1978), 83.

25. Donald J. Mrozek, *Air Power and the Ground War in Vietnam: Ideas and Actions* (Maxwell AFB, Ala.: Air University Press, 1988), 35.

26. Momyer, 70-73.

27. Gen William C. Westmoreland, *A Soldier Reports* (Garden City, N.Y.: Doubleday & Company, Inc., 1976), 411.

28. Lt Gen Keith B. McCutcheon, "Marine Aviation in Vietnam, 1962-1970," US Naval Institute *Proceedings* 97 (May 1971): 135.

29. At the end of the war, MACV had four components: air, sea, and two land. Marine Corps doctrine calls for equal components in the planning stage of an amphibious operation. During execution, the amphibious task force commander retains unity of command, but at a certain stage in the landing operations, the land force commander takes over. Thus, Vietnam marked a significant first when the Marine Corps and Army operated as separate components under the unified commander.

30. SAC tasking was officially conducted through the MACV deputy commander for air operations, not the Seventh Air Force commander (although one person held both positions).

31. Momyer, 77.

32. Gen W. C. Westmoreland, "Report on Operations in South Vietnam, January 1964-June 1968," in *Report on the War in Vietnam (as of 30 June 1968)* (Washington, D.C.: Government Printing Office, 1969), 76; and Momyer, 102-3.

33. Momyer, 87.

34. Ibid., 88.

35. Carriers used two positions in the Gulf of Tonkin to support the air effort in Vietnam—Yankee Station in the north and Dixie Station in the south. From Dixie Station, carrier aircraft flew CAS and strikes into Cambodia and Laos; however, CINCPAC always considered the air war in the north a priority and assigned most carriers to Yankee Station. From there, carrier aircraft were a long way from South Vietnam and required air refueling to support MACV. John B. Nichols and Barrett Tillman, *On Yankee Station: The Naval Air War over Vietnam* (Annapolis: Naval Institute Press, 1987), 8.

36. Adm U. S. Grant Sharp, *Strategy for Defeat: Vietnam in Retrospect* (San Rafael, Calif.: Presidio Press, 1978), 78.

37. Momyer, 78.

38. Sharp, "Report on Air and Naval Campaigns," 20. In *Strategy for Defeat*, however, Sharp states that "CINCPACAF issued operation directives to Commander, Seventh Air Force" (page 78). Whatever Admiral Sharp might have meant by *coordination authority* in "Report on Air and Naval Campaigns" in 1969, it was distinctly different from the term's meaning in 1953. In Korea, Fifth Air Force originated theater campaign plans in conjunction with NAVFE and FEAF. In Vietnam, CINCPAC decided the interdiction campaign (with plenty of help from above) and tasked specific parts for PACFLT and PACAF to execute. At this point, Seventh Air Force's coordination authority came into play by working out the final details of deconfliction. For example, in *Airpower in Three Wars*, General Momyer remarks that

during the Tet offensive early in 1968, Westmoreland requested CINCPAC to authorize the commitment of carrier air to my control. CINCPAC approved what amounted to an extended diversion of [Task Force 77 (TF-77)] carrier air from the bombing campaign in North Vietnam.

The TF-77 commander committed daily sorties for my use, and we controlled these aircraft . . . under 7th Air Force jurisdiction. The arrangement worked. (Page 88)

This remark confirms that, prior to Tet, he had little ability to orchestrate an air campaign with Task Force 77 aircraft even though he had coordination authority.

39. Momyer, 91.

40. Ibid., 95.

41. Ibid., 95-96.

42. Westmoreland, "Report on Operations in South Vietnam," 103.

43. Momyer, 88.

44. Ibid., 81.

45. Ibid., 81-82.

46. CINCPAC did assign coordination authority to the commander of 2d Air Division for air matters in MACV's area of responsibility. McCutcheon, 135.

47. Ibid., 127.

48. Ibid., 134-35; and Maj Gen Norman J. Anderson, "Short Shrift for Marine Air," *Marine Corps Gazette* 65, no. 5 (May 1981): 86.

49. Momyer, 81-82.

50. Seventh Air Force was designated the air defense commander in 1965, having scramble authority over Marine air defense fighters and missile status, as well as launch authority for Marine Hawk batteries. McCutcheon, 136.

51. General Westmoreland reprimanded Maj Gen Norman J. Anderson, Marine air wing commander, for failing to provide air support to the 1st Cavalry Division (Airmobile). General Anderson states that the reprimand was actually an "admonition" and that he could not begin air support until the previously supported Army unit returned the communication equipment. A review of the history of the 1st Cavalry Division suggests that the division had little need for external CAS in 1968. Aside from assigning fault, the incident highlights how operating equipment and procedures in Vietnam were different from those in other wars. See Anderson, 87-88; Momyer, 82; Westmoreland, *A Soldier Reports*, 342-45; and Westmoreland, "Report on Operations in South Vietnam," 173.

52. Maj Michael D. Becker, "Command and Control of Marine TacAir in Joint Land Operations," *Marine Corps Gazette* 72, no. 10 (October 1988): 54.

53. McCutcheon, 143.

54. Ibid., 137.

55. Ibid.

56. Schlight, 286.

57. Westmoreland, "Report on Operations in South Vietnam," 173.

58. Sortie rate is the number of sorties an air unit flies, based on its total number of aircraft. It does not mean that each plane will fly a certain number of sorties—only that the unit will provide an overall equivalent number. For example, if a squadron with 24 planes flies eight planes three times, it would achieve a sortie rate of 1.0.

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59. General McCutcheon recalls that in 1966 the yearly average for Marine air was a sortie rate of 1.0, with surge operations achieving rates from 1.3 to 1.5. General Anderson states that by the beginning of the Tet offensive in 1968, the surge sortie rate was up to 1.8 and that the average rate from July 1967 to July 1968 was 1.5. McCutcheon, 137, 155; and Anderson, 87.

60. In an attempt to quell Marine dissent over losing control of Marine air to the MACV deputy commander for air, the Marine Corps DASC in the I Corps region received scramble authority for immediate CAS missions, even though no other DASC in Vietnam had such authority. McCutcheon, 137.

61. Ibid., 138.

62. This chapter does not address the subject of political and military control of the war above the theater-commander level, although both General Westmoreland (COMUSMACV) and Admiral Sharp (CINCPAC) maintain that higher-level interference was a primary cause of their command problems. Westmoreland, *A Soldier Reports*, 411; and Sharp, *Strategy*, 270.

63. McCutcheon, 137.

64. Momyer, 79.

65. Ibid., 98.

66. It was no accident that the SAC advanced echelon was attached to MACV instead of Seventh Air Force. Futrell, vol. 2, 282; and Momyer, 99.

67. Momyer, 72-73.

68. Ibid., 88.

69. Air Force doctrine was written in World War II under the duress of worst-case scenarios. Because air doctrine was designed to handle such cases, that is why airmen insist on centralized control of air power. The fact that decentralized systems will work when the US has a preponderance of forces operating under no pressure is irrelevant; the true test comes when we have to make tough choices—in an emergency.

70. Momyer, 95-96.

71. Futrell, vol. 2, 301; and Sbrega, 452.

72. Sbrega, 470.

73. From April 1965 through March 1973, the Air Force flew 5,184,875 total sorties, of which 1,673,960 were for attack (strike, flak suppression, CAS/DAS, and air interdiction). Of the total attack sorties, CAS/DAS accounted for 780,973 (47 percent). By way of comparison, the Navy flew 705,928 total sorties; 388,085 of these were attack sorties, of which 69,342 were CAS/DAS (18 percent). The Marine Corps flew 487,100 total sorties; 310,735 of these were attack sorties, of which 223,978 were CAS/DAS (72 percent).

The distinction between CAS and DAS was not always clear. In practice, logging sorties as CAS or DAS depended on matters of political sensitivity. DAS sorties were basically battlefield air interdiction missions flown in South Vietnam. Thus, for the Air Force, CAS/DAS is not strictly CAS. Schligh, 216.

Altogether, CAS/DAS accounted for 45 percent of the total fixed-wing attacks flown from April 1965 to March 1973. Of all the CAS/DAS support during this period, the Air Force flew 73 percent, the Marines 21 percent, and the Navy 6 percent. Of course, these figures do not include the large number of helicopter sorties. Michael M. McCrea, *US Navy, Marine Corps, and Air Force Fixed-Wing Aircraft Losses and Damage in Southeast Asia (1962-1973)* (U) CRC 305 (Arlington, Va.: Center for Naval Analyses, Operations Evaluation Group, August 1976), 5-17, 5-28, 5-42. Information extracted is unclassified.

74. Sbrega, 469.

75. Sharp, *Strategy*, 114-15. One should note, however, that CAS was the only air power available to COMUSMACV after CINCPAC removed him from the interdiction loop.

76. Gregg Easterbrook, "All Aboard Air Oblivion: The Helicopter Army Is Its Own Worst Enemy," *Washington Monthly*, September 1981, 26.

77. Sbrega, 454.

78. *Ibid.*, 455.

79. *Ibid.*

80. McCutcheon, 145.

81. Sbrega, 453.

82. *Ibid.*, 135.

83. Anderson, 88.

84. *Ibid.*

85. Westmoreland, *A Soldier Reports*, 344.

86. Momyer, 339. General Momyer would have been more accurate had he said *campaigns* and wars.

Chapter 6

Desert Storm: Resurrection of the Joint Force Air Component Commander

After the Vietnam War, the services proceeded to develop and train forces to fight the war they preferred to fight, paying scant regard to their Vietnam experience. That is, the Air Force and Army busied themselves with the NATO European scenario; the Navy occupied itself with defeating the Soviet fleet;¹ and the Marine Corps prepared for an amphibious invasion in Southwest Asia. However, mounting pressure for reform in the Department of Defense (DOD) forced the services to look toward unified operations prior to Operation Desert Storm.

Joint Reform

During the seventies and eighties, interservice problems that occurred during a series of combat operations caused key congressional leaders² and one chairman of the Joint Chiefs of Staff (CJCS) to call for service reform.³ Speaking to the Senate in 1985, Sen Barry Goldwater (R-Ariz.) was blunt in his remarks about DOD reorganization:

The inability of the military Services to work together effectively has not gone unnoticed. Attempts have been made in the past to correct this problem, but it is still with us. It is still extremely detrimental to our Nation's ability to adequately defend ourselves. As someone who has devoted his entire life to the military, I am saddened that the Services are still unable to put national interest above parochial interest.

The problem is twofold; first, there is the lack of true unity of command, and second, there is inadequate cooperation among US military Services when called upon to perform joint operations.⁴

The Goldwater-Nichols Department of Defense Reorganization Act of 1986 attempted to correct both of these problems by strengthening the authority of the unified commanders at the services' expense and by increasing the advisory authority of the CJCS.⁵ As a result, the combatant commanders could now organize their commands, prescribe a chain of command, and direct subordinate commands to carry out assigned missions.⁶ Previously, all of these areas were subject to interference from the services. Furthermore, the CJCS and his subordinate staff could now devise independent joint positions, thereby removing them from their former status as the lowest common denominator between the services.

This new authority to create unified positions led the services into an era of cooperation, as each sought to ensure its future. Part of this process of unification was the introduction of the joint force air component commander into joint doctrine in JCS Pub 26, *Joint Doctrine for Theater Counterair Operations (for Overseas Land Areas)*, 1 April 1986. As mentioned earlier, the new position was not universally accepted, some services believing that the JFACC might use theater air power to carry out old Air Force doctrine. Since the Marine Corps and Navy barely acknowledged the JFACC's authority, the services had not written specific procedural doctrine for the JFACC to use in a theater campaign. Instead, the joint force commander (JFC) would organize the command and determine the JFACC's authority. Iraq's invasion of Kuwait in 1990 (fig. 21) would put the JFACC to the test,⁷ and the Air Force—with plenty of combat experience in functional air command—intended to convince all doubters.

Overall Command Structure in Operation Desert Storm

The structure of US Central Command (CENTCOM) in Operation Desert Storm was much like the one used in the European theater in World War II. To keep the coalition together and to adjust for its

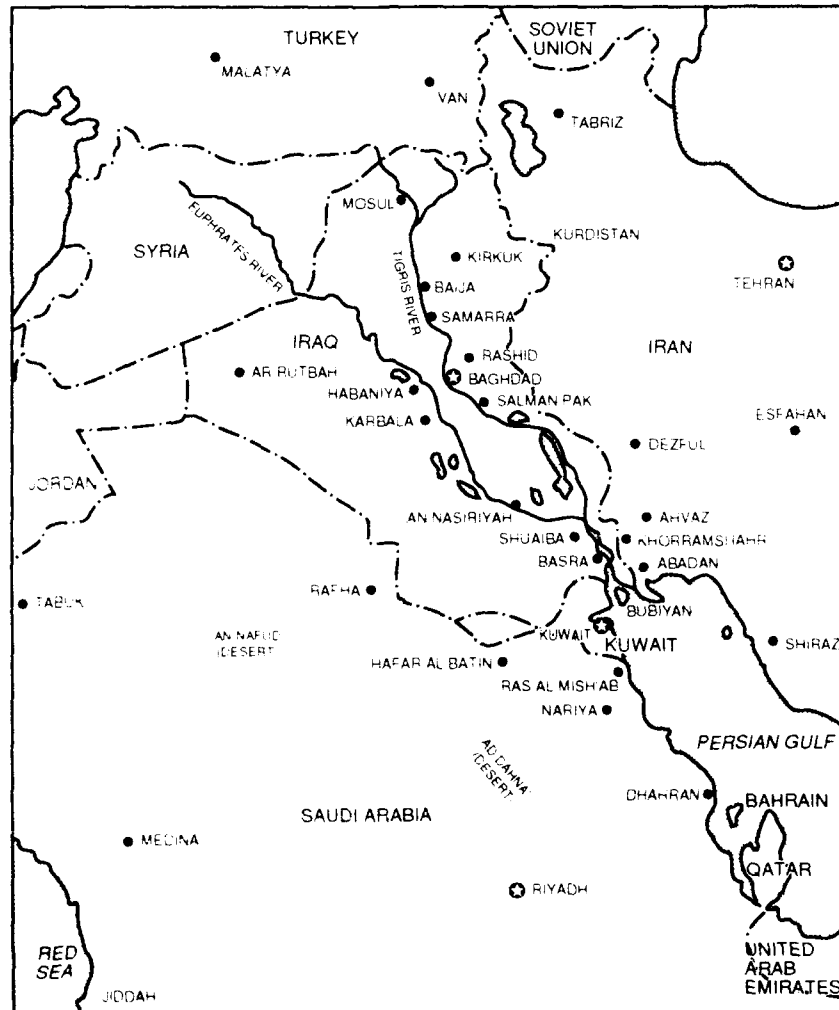


Figure 21. Persian Gulf Region

vastly different forces, Gen H. Norman Schwarzkopf, commander in chief of Central Command (CINCCENT), split command of his land armies between US Army Forces, Central Command (ARCENT) and US Marine Forces, Central Command (MARCENT)⁸ and strongly

influenced the Arab-Islamic Joint Forces Command.⁹ Under CINCENT, the air component was US Air Forces, Central Command (CENTAF), and the naval component was US Naval Forces, Central Command (NAVCENT).¹⁰

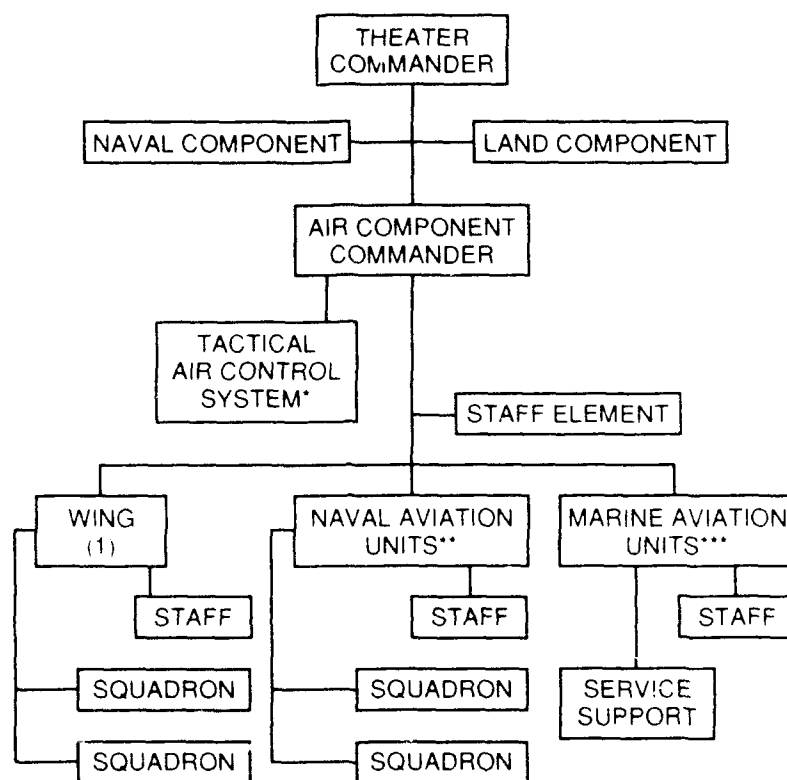
Because there were two US land forces (ARCENT and MARCENT), CINCCENT was also the ground component commander.¹¹ As was the case in Vietnam with PACOM, the theater commander was dual-hatted and controlled his component forces. However, unlike the situation in Vietnam, CINCCENT's control of the land component did not cause coordination problems with air power because the Army did not have any of the fixed-wing air assets the JFACC wanted. Thus, the services with fixed-wing aircraft could settle their differences without encroaching on the theater CINC's component.

Command Structure of the Air Component

At the outset of Operation Desert Shield, General Schwarzkopf designated Lt Gen Charles A. Horner, commander of CENTAF, as the JFACC and gave him the authority he might "normally" have according to Joint Pub 1-02.¹² This authority also included designation as the area air defense commander (AADC), the airlift clearance authority (ACA), and the coordinating authority for interdiction. Although General Horner had broad control, he refused to force any service to do anything it did not want to do. Consequently, service support for the JFACC ranged from almost full submission by the Air Force, to the Navy withholding all fleet defense sorties, to the Marines referring to the JFACC as "joint force air coordinator" in message traffic.¹³

Air Force Support for the JFACC

The Air Force granted the JFACC tasking authority over almost all air forces in-theater (fig. 22). As CENTAF commander, General Horner



Legend

- * US and allied air force forces
- Tactical Air Control System—The execution system the air component commander uses to control assigned air forces. The TACS provides the land/naval interface for employment of air assets—to include naval and Marine aviation—in support of the land battle.
- ** When assigned by unified commander to support air/land battle
- *** When Marine aviation is assigned by unified commander to support air/land battle, sustained operations ashore

Figure 22. Air Force View of Desired JFACC Tasking Authority (From Col Thomas A. Cardwell III, *Command Structure for Theater Warfare: The Quest for Unity of Command* [Maxwell AFB, Ala.: Air University Press, September 1984], 71)

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already controlled all TAC units sent to CENTCOM, and most US Air Forces in Europe (USAFE) units also fell under his operational control, as did SAC's B-52s. However, USAFE retained OPCON of the 7440th Composite Wing in Turkey,¹⁴ and SAC retained control of the entire tanker force,¹⁵ even though Horner, as CENTAF commander, tasked all of these units in the daily air tasking order (ATO). The only Air Force assets not tasked by the JFACC were Air Force Pave Low helicopters controlled by Special Operations Command, Central Command (SOCCENT), although SOCCENT released AC-130s for CENTAF tasking. In short, the JFACC had tactical control (TACON) of all Air Force fixed-wing aircraft in Desert Storm, a span of control that was as complete as that in North Africa and Korea and far ahead of the limited control in Vietnam and even in Europe during World War II.¹⁶

Navy Support for the JFACC

Navy support for the JFACC was mixed. "The Navy retained control of air-to-air and air-to-surface sorties for the purpose of fleet defense."¹⁷ However, the lack of a serious threat to the fleet, together with effective sea lines of communication, meant that the remaining carrier aircraft were available to support the air campaign. The Navy's six carriers and their Tomahawk cruise missiles attempted to work completely within the JFACC system of centralized tasking.¹⁸ Although the Navy could have advocated the use of the route-package system of targeting due to the range limitations of carrier-based aircraft,¹⁹ General Schwarzkopf's designation of General Horner as JFACC eliminated that possibility. Thus, the Air Force plan to totally integrate the daily battle became dominant.

Even though the Navy had complaints about the ATO process,²⁰ the long distance from the carriers to Iraq made cooperation with the Air Force mandatory,²¹ especially with regard to the use of Air Force tankers. "To illustrate, if Red Sea forces had to conduct organic strikes [without Air Force tankers], sorties over the beach would have

been reduced by more than two-thirds."²² Despite the fact that the Navy believed it was not getting all the tanker support it needed,²³ Marine Gen Royal N. Moore, Jr., commented, "All in all, I would give General Horner high marks on the use of tankers."²⁴

Another source of Navy frustration had to do with selecting strategic and interdiction targets:

Naval officers working in the Black Hole [the target planning cell] were all experienced, competent aviators. Their biggest problem was they were too few in number and too junior in rank to influence the day-to-day decision-making process dominated by the Air Force. The point is not that the Air Force was being malevolent (they usually were not). In order for the air tasking order to reflect multiservice concerns and capabilities accurately, however, the planning process at both the executive and individual planner levels must truly be joint.²⁵

With more joint planners, the Navy believes it could have influenced targeting to roll back shore defenses,²⁶ which would have allowed Vice Adm Stanley R. Arthur, NAVCENT commander, to bring the carriers in closer to shore and increase the sortie count dramatically.²⁷ However, the Silkworm missile defenses along the coast proved to be just as elusive as the Scuds. "On the eve of the ground attack . . . only 2 of the 7 known sites (5 of them in Kuwait) were believed destroyed."²⁸

Marine Air Group and the JFACC

At the beginning of Desert Storm, the Marines partially supported the JFACC, but gradually withdrew most of their support prior to the start of the ground war. Lt Gen Walter E. Boomer retained OPCON of the 3d Marine Air Wing (MAW) throughout the war, while General Moore, wing commander, "gamed the ATO process."²⁹ For example, as the air war began, the Marines released 50 percent of their sorties to the JFACC for combat air patrol and interdiction, in accordance with the Omnibus Agreement of 1986.³⁰ After 36 hours, however, General Moore started pulling back sorties in order to prepare the Marine battlefield: "At about day 15, instead of giving

AFCENT [CENTAF] 50 percent of the assets, I gave him about 15 percent.”³¹ At this stage, General Horner made “trade-offs” with General Moore for deep-strike support, exchanging A-10 and F-16 sorties for another deep-strike group.³² In General Moore’s words,

By the later stages I was almost totally separated from the deep battle. By then, the only flights I was giving AFCENT [CENTAF] were flights that were against targets in Kuwait that were on the MEF [Marine Expeditionary Force] target list. If they didn’t go against those targets we worked it out.³³

In essence, after the first 36 hours of the air war, the Marines decided that the JFACC was not responsive to their battlefield-preparation needs, withdrew support, and carried out their own air operation.³⁴ In accordance with the Omnibus Agreement, the Marines would retain control of all MAGTF air assets; “make sorties available” for air defense, long-range interdiction, and reconnaissance; and release “excess sorties”—unless they were overridden by the joint force commander. Even though the Marines eventually retained 85 percent of Marine air assets for their own use, the JFC did not override this action, and the JFACC did not press the doctrinal issue.

Further, acting as AADC and ACA, General Horner directed the Marine Air Group to control the airspace above its battlefield as part of the theater plan. Interpreting this to mean control of its own area of responsibility,³⁵ the MAG—using fixed-wing aircraft, helicopters, anti-air defense, and air control centers—strictly followed Marine doctrine in fully supporting the MAGTF.³⁶ “The whole 3d MAF was in direct support, 100 percent of the time to the two divisions.”³⁷ As a result, the Marines maintained de facto integrity of the MAGTF for the duration of the conflict, something they had never been able to do in any previous war.

Army Support for the JFACC

Although the Army did not have any fixed-wing aircraft to release to the JFACC’s control, General Horner—acting as AADC—inte-

grated all of the Army's surface-to-air missile (SAM) defenses with the fighter cover to enhance theater air defense and assure safe passage. The Army also used the sensing capabilities of Air Force Space Command's satellites to provide information about Scud launches to Patriot SAM defenses; this early warning system contributed greatly to the Patriot's limited success.

The Army's most vocal objection after the war concerned the JFACC's failure to strike interdiction targets submitted by the corps. The primary cause of this problem was a lack of feedback from the CINC and JFACC to the corps commander. At their daily meetings, General Schwarzkopf routinely redirected General Horner's ATO. Unfortunately, the CINC did not also keep the corps commanders informed of his priorities. The result was that the JFACC was blamed for ignoring corps targets. For example, General Schwarzkopf directed that Iraqi units with an attrition level below 50 percent combat effectiveness not be attacked. Thus, the JFACC was restricted in the amount of air support he could send to certain corps.³⁸

Another reason for the perceived lack of support was the JFACC's assessment of the corps target lists. For example, the VII Corps target list submitted on 31 January 1991 was assessed as follows: 14 targets were old, nine were dispersed infantry, 13 were outdated AAA/SAM sites, and six were suitable targets for air attack. The latter six were tasked on the ATO, but the rest were rejected. Whether due to bad intelligence or improper use of air assets, failure to include targets submitted by VII Corps on the ATO—regardless of the reason—was perceived as rejection.³⁹

Unlike the situation in Vietnam, control of the Army's helicopters was never an issue in Desert Storm. However, the use of helicopters during the Gulf War opened a Pandora's box of questions afterwards. For example, shouldn't there have been detailed coordination between the Army and the JFACC when units like the 101st Airborne Division (Air Assault) "penetrated 90, then 150 miles into Iraqi territory in brigade-sized assaults"?⁴⁰ Why was the initial raid by Apache helicopters to knock out Iraqi early warning radars not considered offensive counterair?⁴¹ Why did the Apaches then sit out the rest of

the air campaign? Why should the VII Corps's use of its entire 11th Aviation Brigade as a reserve contingency to attack Iraqi tactical reserves⁴² not be considered battlefield air interdiction (BAI)?⁴³ Certainly, in Desert Storm the Army used the attack helicopter as more than an indirect fire-support weapon. These questions, along with the unrestricted use of the long-range Army tactical missile system (ATACMS) in combat, raised concerns about who should coordinate deep-operations weapons with fixed-wing aircraft.⁴⁴

An indication of the potential impact of this decision occurred during the days of the ground war:

To avoid JFACC control, XVIII Airborne Corps advanced the FSCL [fire support coordination line] well north of the Euphrates River on 27 February and thus reserved an area for attack helicopter operations unconstrained by any requirement to coordinate with the JFACC. The effect of this use of the FSCL was to hamper air power's ability to destroy escaping Iraqi ground forces until the FSCL was finally pulled back after several hours.⁴⁵

JFACC Tasking: Flexible Response versus the Air Tasking Order

One of the primary reasons for centralized control of air power is the ability to respond to theater requirements quickly—with the entire force if necessary. Just as General Schwarzkopf transferred the Tiger Brigade of the 2d Armored Cavalry Division to beef up Marine armor,⁴⁶ the JFACC used his control to move aircraft where they were most needed. Seven examples of this kind of flexible response are notable: (1) tanker support for the initial unit deployments into the Gulf;⁴⁷ (2) tanker support to carriers, which allowed Navy aircraft to strike deep; (3) diversion of ordnance from Navy and Air Force stocks to the Marines;⁴⁸ (4) use of Navy F-18 high-speed antiradiation missile (HARM) shooters to fly 60 percent of the suppression of enemy air defenses (SEAD) sorties flown in the first 48 hours;⁴⁹ (5) use of Saudi runway-attack weapons, French air-to-ground missiles, and British precision guided munitions (PGM);⁵⁰ (6) diversion of air assets to hunt for Iraqi Scuds;⁵¹ and (7) diversion of all aircraft armed

with PGMs to attack Iraqi divisions directly in front of the Marines in the last nights, before the ground offensive.⁵² Only by concentrating air power under a central manager was it possible to reap the benefits of these actions.

The principal problem associated with having a JFACC was the slowness and complexity of CENTAF's ATO process. The fact that the ATO cycle ran 48 hours meant that a target would be hit 48 hours from initial request,⁵³ which led General Moore to comment that

the JFACC process of having one single manager has its limitations, as does every system. It does not respond well to a quick-action battlefield. If you're trying to build a war for the next 72 to 96 hours, you can probably build a pretty good war. But if you're trying to fight a fluid battlefield like we were on, then you need a system that can react.⁵⁴

Similarly, Capt Lyle G. Bien, the Navy's air liaison officer in Riyadh, Saudi Arabia, observed that

the JFACC air tasking order . . . proved effective in managing the 3,000 daily sorties flown by Coalition air forces during Desert Storm, but the 48-hour ATO cycle did not permit rapid response to mobile targets. In a more dynamic war, only a reduced ATO cycle—which appears to be almost physically impossible—or a greater reliance on aircraft standing strip or airborne alert will be required.⁵⁵

In Desert Storm, the interdiction battle was much more fluid than in previous wars. For instance, the Army—now equipped with the joint surveillance target attack radar system (JSTARS)—was able to see much deeper into the battle and requested strikes on BAI targets, whose position might change in a matter of hours or minutes. Even the traditionally static air interdiction mission took on new timeliness as aircraft chased Scud missile transporters after launch and F-16 "killer scout" forward air controllers funneled interdiction sorties into "kill boxes."⁵⁶ Although all non-Air Force planners agreed that the ATO cycle was too long, they conceded that it might be the only way to implement a JFACC's integrated plan.⁵⁷

The Air Force responds that critics confuse the length of the ATO planning cycle with its responsiveness in execution—witness the

JFACC's responsiveness to the attacks at Al Khafji from 29 to 31 January 1991. On the second night, JSTARS identified the 3d Iraqi Armored Division and rear elements of the Iraqi 5th Mechanized Division moving south toward the ongoing battle at Al Khafji. The JFACC diverted hundreds of air attacks against these divisions that night. By dawn, the Iraqi armor was decimated and retreating. The exploitation element of the Iraqi offensive was detected, attacked, and defeated by air—all in the same night.⁵⁸

The complexity of the ATO also frustrated the Navy and Marines, who consistently alluded to its ponderous size and overwhelming scope.⁵⁹ Indeed, with an eye toward the ATO's 300-page bulk, Vice Adm Stanley R. Arthur wryly noted that "trees were big losers in Desert Storm."⁶⁰ Although the ATO system functioned well, General Moore pointed out that it probably would have had difficulty tasking the helicopter force: "As you get down to the helos, you've got a real saturation problem on your hands. . . . We flew 9,000 of those sorties in the last five days. When you start to put those kinds of numbers in the system, you just clog it up."⁶¹ Thus, the major objection to the JFACC in Desert Storm was his use of the ATO as the instrument for implementing doctrine of centralized control, a subject that is discussed further in chapter 7.

Service Lessons

Lessons learned in Desert Storm about the control of air power are fairly simple. The Air Force believed that the overall performance of the air campaign vindicated the use of the JFACC. As General Horner put it, "The JFACC concept works."⁶² Headquarters USAF added that

the overwhelming effectiveness of the air campaign through the efforts of Army, Navy, Marine, Air Force and allied/coalition air power would not have been possible without the JFACC single concept of operations and infrastruc-

ture to implement the plan. While refinements are necessary to permit the timely management of the large volume of data related to scheduling thousands of sorties, the process worked well.⁶³

Evidence of air power's "overwhelming effectiveness" was the ease with which coalition ground forces sliced through Iraqi defenses after our aircraft had prepared the battlefield. Similarly, Gen Michael Dugan, Air Force chief of staff before Desert Storm, praised the work of air power in the battle for Khafji: "The Iraqis mounted a multidivision attack at night in the vicinity of Wafra. The attack was detected, engaged and defeated by air."⁶⁴ Further, General Schwarzkopf declared in his briefing of 27 February 1991 that "the air war, obviously, was very, very effective."⁶⁵ Unsurprisingly, then, the Air Force, in its quest to strengthen the position of the JFACC in joint doctrine, will use Desert Storm as proof that centrally coordinated air forces can be decisive in theater war.⁶⁶

The Navy also supported the JFACC concept after the war,⁶⁷ as reflected in NAVCENT's remark that "Desert Storm could not have been waged so effectively without the JFACC."⁶⁸ The official Navy position is less enthusiastic, but still complimentary: "The . . . JFACC used the air tasking order . . . as a centralized planning and execution tool to effectively manage the unprecedented volume of sorties, especially during the preplanned, structured stages of the campaign."⁶⁹ The Navy recognized that if it is "aggressive in attending to the J-factor" (i.e., filling its part of joint targeting staffs), it will be able to improve the carrier battle group's projection of naval aviation ashore.⁷⁰ As the war ended, the Navy attitude was clear: "If we do not like joint planning, then we must fix the problems from the inside."⁷¹

The Marines successfully operated the MAGTF as an integrated combined arms team in a major war for the first time in their history. Although the Marines released 15 percent of their air assets to the JFACC, the other 85 percent was under their control, bombing the targets they wanted to bomb, in front of the Marine divisions they wanted to support. Despite their success in Desert Storm, the Marines know that they owe their independence to a sympathetic CINCCENT

and to the absence of detailed JFACC procedures for integration into the joint system. They will be leery of any further inroads the Air Force makes into joint doctrine with the JFACC.

The Army's attitude about the use of air power in Desert Storm is ambivalent. For example, the Army was pleased with the fixed-wing support it received and even more pleased about the performance of the Apache helicopter. Indeed, during the ground war, the weather was so bad and the battlefield smoke so thick that oftentimes the helicopter was the only battlefield air support available,⁷² a fact which has evidently earned the attack helicopter a permanent place alongside fixed-wing CAS and artillery.⁷³ However, the effectiveness of the Apache and the ATACMS in fighting the deep battle may initiate a doctrinal battle over which service will control deep operations. Although the JFACC has no designs on the Army's fire-support weapons, integration of the interdiction campaign does fall under that commander's purview. Therefore, corps-level weapons such as the Apache helicopter and the ATACMS do seem to infringe on the Air Force's traditional control of the interdiction effort.

Finally, no discussion of Desert Storm would be complete without acknowledging the contribution of the Goldwater-Nichols Department of Defense Reorganization Act of 1986, especially its conferring of considerable legal authority on CINCCENT. Commenting on General Schwarzkopf's ability to operate effectively, retired Marine general and former CINCCENT George B. Christ declared that "Goldwater-Nichols made the big, big difference."⁷⁴

Notes

1. After 1986, however, when the Soviet fleet withdrew to the bastion areas to protect its submarine fleet, the US Navy switched to a power-projection role.

2. In their 1985 Senate speeches on DOD reform, Sen Barry Goldwater and Sen Sam Nunn agreed that all of the following incidents were exacerbated by interservice rivalry: (1) seizure of the USS *Pueblo* in 1968 (aircraft from USS *Enterprise* were within range, but Fifth Air Force did not contact Seventh Fleet with the request); (2) failure of the Iranian hostage mission (interservice rivalry and incom-

patibility of Air Force/Navy equipment led to the selection of inexperienced Marine pilots over experienced Air Force pilots); (3) problems in Grenada (the infamous AT&T phone call by an Army officer to get Navy fire support highlighted procedural difficulties and the incompatibility of communications equipment); and (4) the bombing of the Marine barracks in Lebanon (investigations revealed that theater medical facilities were barely capable of supporting that small contingent). Sen Barry Goldwater, "DOD Organization: An Historical Perspective," *Armed Forces Journal International*, October 1985, 13; Sen Sam Nunn, "DOD Organization: An Historical Perspective," *Armed Forces Journal International*, October 1985, 14-15; and Sen Sam Nunn, "The Joint Chiefs of Staff and Unified Commands," *Armed Forces Journal International*, October 1985, 22.

3. In 1982 Gen David C. Jones, then the CJCS, started the debate that led to the passage of the Goldwater-Nichols Department of Defense Reorganization Act in 1986 by strongly denouncing the current system and calling for reform. Lt Comdr James K. Gruetzner and Maj William Caldwell, "DOD Reorganization," *US Naval Institute Proceedings* 113, no. 5 (May 1987): 139-40.

4. Goldwater, 12. Sen Sam Nunn also reported to the Senate that

the power of the component commands backed up by the individual services in Washington, makes joint planning very, very difficult. . . . Many commanders-in-chief of the unified commands have complained that they are not certain whether their boss is the Chairman of the Joint Chiefs or the Secretary of Defense ("Joint Chiefs," 22).

5. Gruetzner and Caldwell, 143-45; and Larry Grossman, "Beyond Rivalry," *Government Executive* 23, no. 6 (June 1991): 13-14.

6. Gruetzner and Caldwell, 144-45.

7. Although Desert Storm marked the first use of the JFACC, functional air commanders have been combat tested in all US wars since World War I.

8. US Special Operations Command, Central Command (SOCCENT) was also attached at the component level.

9. Lt Gen John J. Yeosock, "Army Operations in the Gulf Theater," *Military Review* 71, no. 9 (September 1991): 4.

10. Vice Adm Stanley R. Arthur commanded NAVCENT from the USS *Blue Ridge* and had a representative collocated with CINCCENT as NAVCENT Riyadh. Capt Steven U. Ramsdell, to director, Naval Historical Center, letter, subject: Trip Report, 14 May 1991.

11. Grossman, 14.

12. General Schwarzkopf "was bombed by Air Force B-52s in Vietnam and was deputy commander of the Grenada operation—and vowed never to repeat the mistakes of those campaigns." *Ibid.*, 15.

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13. Maj Terry New, Headquarters USAF, Directorate of Plans, Doctrine Division, Joint Force Air Component Commander in Operation Desert Storm, staff study, 4 November 1991, 1-7.

14. Initially, Turkey did not wish US aircraft stationed in Turkey to participate in Desert Storm, approving operations only after the air war started. This, together with the fact that one of the 7440th Composite Wing's units was assigned a NATO mission, meant that United States European Command retained OPCON. Brig Gen Lee A. Downer, "The Composite Wing in Combat," *Airpower Journal* 5, no. 4 (Winter 1991): 5.

15. Grossman, 14.

16. Aside from the differences in meaning of *command*, *coordinate*, *mission-direct*, and *task*, the air component commanders (or their equivalents) in North Africa and Desert Storm planned and carried out an integrated air plan. In Korea, Fifth Air Force, FEAF, and NAVFE also carried out an integrated air plan, although not to the same extent as in Desert Storm or North Africa. In contrast, in Vietnam PACOM had an interdiction plan and Seventh Air Force and COMUSMACV had a CAS plan. Likewise, in Europe during World War II, although the tactical air forces were highly integrated, the strategic air forces had their own agenda and operated outside of General Eisenhower's control, except briefly for Operation Overlord.

17. Thomas A. Keaney and Eliot A. Cohen, *Gulf War Air Power Survey Summary Report* (Washington, D.C.: Department of the Air Force, 1993), 154.

18. Lt Gen Royal N. Moore, Jr., "Marine Air: There When Needed," US Naval Institute *Proceedings* 117, no. 11 (November 1991): 64; and Vice Adm Stanley R. Arthur and Marvin Pokrant, "Desert Storm at Sea," US Naval Institute *Proceedings* 117, no. 5 (May 1991): 83.

19. As in Vietnam, carrier aircraft could penetrate deep into enemy airspace only with the help of air refueling. This requirement constrained the number of missions they could fly because the Navy got no special treatment from Air Force tankers. If Navy aircraft had been assigned areas of responsibility closer to the water, they could have increased their number of sorties and made a bigger contribution to the war.

20. Capt Lyle G. Bien, "From the Strike Cell," US Naval Institute *Proceedings* 117, no. 6 (June 1991): 59.

21. Rear Adm Riley D. Mixson, "Where We Must Do Better," US Naval Institute *Proceedings* 117, no. 8 (August 1991): 38.

22. Ibid.

23. Briefing, Office of the Chief of Naval Operations, Department of the Navy, subject: The United States Navy in Desert Shield/Desert Storm: Executive Summary, 15 May 1991, 5.

24. Moore, 67.

25. Comdr Daniel J. Muir, "A View from the Black Hole," *US Naval Institute Proceedings* 117, no. 10 (October 1991): 86.

26. "Instead of going directly after targets in central Iraq at the outset, these officers [senior Navy officers in theater] described a campaign which would have begun by attacking air defenses along the coast and moving inland as the air defenses were rolled back. . . . Strategic targets . . . would have to wait until the campaign got to them." Ramsdell, 4.

27. Mixson, 39.

28. Keaney and Cohen, 154.

29. Moore, 63.

30. General Moore released all A-6 and EA-6B sorties, as well as half of the F/A-18 sorties at the start of the air war.

31. Col Norman G. Ewers, "A Conversation with Lt Gen Royal N. Moore, Jr.," *Marine Corps Gazette* 75, no. 10 (October 1991): 46.

32. Moore, 64.

33. Ewers, 47. *Deep battle* is an Army term that refers to fighting an enemy force to the full depth of its front echelon through artillery, air attack, and airmobile assault. Deep operations attack the enemy's second-echelon forces and operational reserves.

34. As far as the Air Force was concerned, all of the targets hit by the Marines were also on the target list and were part of the JFACC's air campaign. Whether the Marines decided to hit the targets or whether the JFACC directed them to hit the targets was not an issue to warriors in the field. In retrospect, however, this raises a significant doctrinal question: Does a JFACC plan and execute an air campaign as part of the theater campaign, or do individual ground commanders have dedicated air assets to do with as they please?

35. Moore, 63; and Ewers, 46-47.

36. Maj William R. Cronin, "C³I during the Air War in South Kuwait," *Marine Corps Gazette* 76, no. 3 (March 1992): 35.

37. Ewers, 47.

38. Lt Col Richard B. H. Lewis, *Desert Storm—JFACC Problems Associated with Battlefield Preparation* (Carlisle Barracks, Pa.: US Army War College, 1993), 34.

39. *Ibid.*, 30-31.

40. Maj John M. Fawcett, Jr., "Which Way to the FEBA?" *Airpower Journal* 6, no. 3 (Fall 1992): 14.

41. Although the range of the mission was not specified, in the previous two years, the 1-101st Aviation Regiment had already practiced attack missions of 210 and 350 nautical miles with their extended-range fuel system. Capt Timothy P. DeVito, "'Expect No Mercy' Apaches: A Potent Combat Multiplier," *Army Aviation* 41, no. 1 (31 January 1992): 41-43.

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42. "The corps' 11th Aviation Brigade, with two Apache attack battalions, 4-229th Attack Helicopter Regiment (AHR) and 2-6 Cavalry (CAV), stood by in FAA [forward assembly area] Hop ready to execute CONPLAN (operation plan in concept format) BOOT, a corps contingency plan to use attack helicopters against any tactical reserves the Iraqis might launch against 1st ID [Infantry Division]" Lt Col Peter S. Kindsvatter, "VII Corps in the Gulf War: Ground Offensive," *Military Review* 72, no. 2 (February 1992): 23-24.

43. The new version of AFM 1-1, *Basic Aerospace Doctrine of the United States Air Force*, 2 vols., March 1992, no longer recognizes BAI (although it is mentioned once in a supporting essay in volume 2). The Air Force maintains that BAI is simply a subset of air interdiction and is, therefore, an unnecessary term. (Note that it is not defined in Joint Pub 1-02, *Department of Defense Dictionary of Military and Associated Terms*, 23 March 1994.) However, its current Army definition is as follows:

Air action against hostile surface targets which are in a position to directly affect friendly forces and which requires joint planning and coordination. While BAI requires coordination in joint planning, continuous coordination may not be required during the execution stage (FM 101-5-1, *Operational Terms and Symbols*, 21 October 1985, 1-10)

44. In Desert Storm, heavy air attacks against the Iraqi Republican Guard were deep operations. See also note 33.

45. Keaney and Cohen, 157; and Lewis, 24-25.

46. Grossman, 14.

47. Ibid., 10.

48. Moore, 67.

49. Mixson, 38.

50. Lt Gen Charles A. Horner, "The Air Campaign," *Military Review* 71, no. 9 (September 1991): 21.

51. Lt Gen Charles A. Horner, "Desert Shield/Desert Storm: An Overview," *Air Power History* 38, no. 3 (Fall 1991): 8.

52. "Thirteen days prior to G-Day, it became obvious that Iraq's combat effectiveness was much higher in MARCENT's AOR [area of responsibility]. . . . Iraqi front-line unit combat effectiveness was 78 percent in MARCENT's compared to 45 percent in ARCENT's." This disparity was due to MARCENT's high percentage of Marine air flown in its AOR. Marine aircraft had little capability against tanks and artillery when they were employing beyond the range of ground forward air controllers using laser target designators. The JFACC compensated by allocating a high percentage of Air Force and Navy PGM-capable aircraft into

MARCENT's AOR, which "reduced Iraqi front-line combat effectiveness from 78 percent to 59 percent prior to G-Day." Lewis, 10-12.

53. Horner, "Air Campaign," 22.

54. Moore, 63.

55. Bien, 59.

56. Lewis, 16-17.

57. The ATO was very flexible during Desert Storm. For instance, to improve the timeliness of interdiction, the JFACC began handling short-notice targets by diverting interdiction sorties in the air and prior to takeoff. The Air Force maintains that criticism about the rigidity and inflexibility of the ATO is based on misunderstanding of what the ATO did and what the JFACC actually accomplished in Desert Storm.

58. Keaney and Cohen, 21, 109; Lewis, 32-33; and Eliot A. Cohen, "The Mystique of U.S. Airpower," *Foreign Affairs* 73, no. 1 (January-February 1994): 111.

59. Unlike the Marines, the Navy did not have compatible Computer-Assisted Force Management System (CAFMS) equipment and therefore could not receive the ATO as transmitted from CENTAF. The Navy explanation is that Seventh Fleet, as a PACOM element, was used to working with the PACAF ATO system, which was different from the Ninth Air Force ATO system used by CENTAF. Ramsdell, 3.

60. Arthur and Pokrant, 87.

61. Moore, 64. Although the Marines centrally controlled their Marine Air Group helicopters, they did so from a separate center—the helicopter tactical air control center (HTACC). This center was just as capable as the fixed-wing TACC and was designed to back up the other control center as the alternate TACC. Ewers, 46.

62. Horner, "Air Campaign," 26.

63. Memorandum, Lt Gen Michael A. Nelson, deputy chief of staff, Plans and Operations, Headquarters United States Air Force, to director, Joint Staff, subject: Joint Assessment Report (JAR), 22 April 1991, C-9.

64. Gen Michael Dugan, "First Lessons of Victory," *U.S. News & World Report*, 18 March 1991, 36.

65. Gen H. Norman Schwarzkopf, "Central Command Briefing," *Military Review* 71, no. 9 (September 1991): 106.

66. The term *coordinated* is used instead of *controlled* because General Horner continually stressed that Desert Shield/Desert Storm "was a *coordinated* [emphasis in original] effort." Horner, "Desert Shield/Desert Storm," 8.

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67. Maj Gen J. J. Sheehan, director for Plans and Policy, US Atlantic Command, to CINCLANTFLT, CINCARLANT, CINCAFLANT, letter, subject: Joint Force Air Component Commander (JFACC), 19 February 1992, 3. Sheehan alludes to Joint Test Pub 3-04, *Doctrine for Joint Maritime Operations (Air)*, 1 May 1988, which states that "in the maritime environment, if the JFC designates a JFACC he will normally be a naval commander" (III-6). He also notes that "in the Atlantic AOR when a naval commander is designated as JFACC, he will normally be collocated with the CJTF [commander, joint task force]."

68. Arthur and Pokrant, 86.

69. Briefing, 4.

70. Mixson, 39.

71. Muir, 86.

72. Yeosock, 7; and Ewers, 47.

73. Moore, 66. General Moore notes that the same smoke and weather that made attack helicopters so valuable also protected them from shoulder-launched SAMs and antiaircraft artillery fire.

74. Grossman, 13-14.

Chapter 7

Joint Force Air Component Commander: Past and Future

From the outset, this study has sought to articulate the problems that underlie the services' acceptance of a JFACC and to find a solution to those problems. Toward that end, the preceding chapters have reviewed arguments for and against centralized control of air power throughout four wars. This chapter attempts to consolidate prior observations and arrive at a solution.

One must realize, however, that—rather than dealing with reality—successful solutions deal with perceptions of reality. That is, each service's air power history often misstates the whole truth by telling only a part of the story. For instance, in Vietnam the Army and Marine Corps were convinced that air interdiction was useless. Although Air Force and Navy aviators agreed that this mission had its limits, they pointed out that Washington had tied their hands and further noted that—despite these restrictions—air interdiction had stopped North Vietnam's offensive of 1972.¹ Undoubtedly, the "truth" is debatable, each service remembering it differently and adjusting its doctrine accordingly.

Interservice Perceptions

Before reviewing widely held perceptions about each service's use of air power, one should remember that such assertions usually have some basis in fact. Indeed, at some point, all of them were true, as has been documented in chapters 2 through 6. What remains is determining whether these assertions are still true and—even if they are not—finding out who continues to think so. If we can identify both the issues and the prejudices, perhaps we can arrive at a solution.

Does the Air Force Believe That Air Superiority Comes First?

Although the Air Force does not believe that theater air superiority takes priority over the ground war,² it does believe that air superiority comes first unless the ground forces need emergency support.³ Moreover, both the Navy and the Air Force agree that achieving theater air superiority is the best way to maintain local air superiority.⁴ Both the Army and Marine Corps agree, however, that only local air superiority is necessary and that it is the first priority in battle, provided the enemy has not broken through.

How one achieves air superiority over the battlefield is another issue. The Air Force and Navy believe in offensive strikes against the opponent's airfields, while the Marines prefer to attain local air superiority through a mixture of defensive fighter combat air patrols and surface-to-air missiles; the Army also uses SAMs defensively to control the airspace directly overhead. Although the services agree on the preeminence of air superiority, they are at odds over which mission gets second place: air interdiction or close air support.

Does the Air Force Fight Air Campaigns at Soldiers' Expense?

Although the Air Force fought independently of theater commanders during World War II, this has not been the case since. In Korea, Vietnam, and Iraq, the air component was part of the theater staff and supported the theater commander's campaign.⁵ After relinquishing apportionment authority to the theater commander in 1965, the Air Force has no way of influencing the partitioning of air power between land support and independent air action, other than trying to change the joint force commander's mind.

Nevertheless, air assets under a JFACC's operational or tactical control are no longer directly responsive to the ground component commander. To acquire air support from a JFACC, land commanders must either convince the JFACC that they need air support or must

convince the JFC to overrule the JFACC. In rebutting an Air Force interpretation of JFACC authority, Maj Gen M. P. Sullivan frankly replied that "authority to task assets is de facto OPCON."⁶ Consequently, ground component commanders may not receive the tactical air resources they want because the theater commander has higher strategic- and operational-level priorities to which the JFACC must respond. Nevertheless, this grand strategy provides little comfort to soldiers under fire who just want to know where their air support is.

Has the Air Force Lost Touch with the Army at the Tactical Level?

In World War II, the Air Force achieved a high level of cooperation with the Army by dedicating tactical air commands to "support" each army, and tactical air forces to support each army group.⁷ Above that level, the deputy theater commander, Air Marshal Tedder, acted as if he were a modern JFACC. In Korea, tactical coordination occurred at the Fifth Air Force/Eighth Army level, with the theater air component (FEAF) located in Japan with Far East Command. In Vietnam, Seventh Air Force—the tactical air force liaison—was paired with a subunified command—MACV—in South Vietnam, while PACOM ran the interdiction campaign from the theater level in Hawaii. In Iraq, the tactical air force liaison level merged with the theater air component level in the same person—the JFACC. This trend indicates that the tactical air liaison level has gradually risen to the point that air forces are attempting to liaise with the Army at the theater level. Thus, the Air Force probably has given up a degree of closeness to the Army in its drive to control air power centrally.

Does the Air Force Give a Higher Priority to Interdiction than to Close Air Support?

Early Air Force doctrine did in fact give interdiction a higher priority than it did to CAS. The often-quoted FM 100-20 (1943)⁸ and its postwar successor FM 31-35 (1946)⁹ gave interdiction second priority and CAS third priority in the scheme of tactical air operations. How-

ever, the *Joint Training Directive for Air-Ground Operations* (1950) reflected a change in the official Air Force position: "No degree of relative importance can be attached to the general tasks described in [interdiction] and [close air support]. Each may assume a major role in a given situation. Both are of a continuing nature."¹⁰

Nevertheless, the Air Force has always believed that interdiction made better use of air power than did CAS. Specifically, FM 100-20 remarked that

in the zone of contact, missions against hostile units are most difficult to control, are most expensive, and are, in general, least effective. Targets are small, well-dispersed, and difficult to locate. In addition there is always a considerable chance of striking friendly forces due to errors in target designation, errors in navigation, or to the fluidity of the situation. . . . Only at critical times are contact zone missions profitable.¹¹

Forty-nine years later, AFM 1-1, *Basic Aerospace Doctrine of the United States Air Force*, reaffirms this position on CAS: "The priorities of war first, campaign second, and battle third remain appropriate general guidelines";¹² further,

close air support produces the most focused and briefest effects of any force application mission; consequently, close air support rarely creates campaign-level effects. Although close air support is the least efficient application of aerospace forces, at times it may be the most critical by ensuring the success of survival of surface forces.¹³

Taken together, these two statements indicate that the Air Force gives a higher priority to interdiction than to CAS.

Will the Air Force Devote Air Resources to Close Air Support in Peacetime?

The Air Force has a poor record of being prepared to provide close air support for ground forces at the outbreak of war. Although the strong showing of its A-10s and AC-130s in the CAS role during Desert Storm suggests that the service may have turned things around, we must remember that senior Air Force leadership dates

from the Vietnam era, prior to any such reform movement. Certainly, earlier air power histories are critical of the Air Force CAS system, its equipment, and its ability.

Close Air Support System. The Air Force CAS system developed in Italy during World War II, requiring a detailed process of approval through the Army chain of command in order to scramble centrally controlled alert fighters for CAS.¹⁴ Consequently, its strength was economy of effort, as Army commanders weighed CAS requests against available organic artillery. The Marine CAS system, however, sacrificed economy of effort for immediate response, using on-orbit aircraft assigned to the tactical ground commander. In comparison, the Air Force system was slow and remained so during the Korean War. In 1965, though, the Air Force agreed to divert airborne sorties for immediate CAS, and the Army agreed to forgo approving air support requests at each level, both agreements having the effect of speeding up the system considerably. Despite the increase in speed, a diverted aircraft can never react faster than one orbiting overhead. The issue thus remains one of economy of force: campaign versus battle needs.

Close Air Support Equipment. The introduction of Air Force equipment dedicated to CAS has reversed earlier trends of peacetime decay. Before war broke out in Korea and Vietnam, the Air Force did not have the men, planes, forward air controllers, or communications equipment to support the Army.¹⁵ During the interwar years, CAS systems and planes that had been used successfully in wartime were left to decay, as funding and training for nuclear warfare took a higher national priority. After Vietnam, however, the Air Force retained its AC-130 capability and developed the A-10, which was dedicated to CAS. Furthermore, the Air Force's F-16 and F-15E fighter-bombers are capable of performing CAS in a swing role. Yet, the Air Force has no plans to replace the A-10, and funding for the CAS-specific A-16 was eliminated. Thus, soldiers—despite being pleased with Air Force

support during Desert Storm—question the Air Force's intentions with regard to CAS.

Close Air Support Ability. Nothing is more contentious than accusations by some historians that Air Force pilots were just not as capable as Marine pilots in the CAS role, but there is an element of truth to this. The Marines have always trained primarily for CAS, and their wartime performance record shows it. During Pacific operations early in World War II, Marine-delivered CAS had the reputation of being better than the Army Air Forces' CAS. However, as the AAF came up to speed, its P-47s delivered CAS that was just as effective as the Marines'. Nevertheless, an AAF/AF pattern developed in World War II that would repeat itself in Korea and Vietnam: a poorly trained and equipped tactical air force would start slowly but reach high performance levels by the end of the war, only to decay again in peacetime. The Marine Corps has not followed this cycle because CAS is the Marine Air Wing's primary mission. Thus, in all wars prior to the one with Iraq, the Marines were better prepared to perform CAS at the outbreak of hostilities. Still, the Air Force did break the cycle after Vietnam and was well trained going into Desert Storm. Today, there is probably little difference between Air Force and Marine CAS. Gen Robert D. Russ, commander of TAC in 1988, summarized the current Air Force position: "Tactical aviators have two primary jobs—to provide air defense for the North American continent and support the Army in achieving its battlefield objectives."¹⁶

Will the Navy Leave Land Forces Unsupported to Protect Its Ships?

Soldiers and airmen have often misunderstood the movement of Navy fleets during wartime. From their viewpoint, land forces appear to have been left alone as the Navy chose to protect its ships at Wake Island, Guadalcanal, and Leyte Gulf during World War II. The Navy

points out, however, that putting its capital ships at risk in a tactical battle could cause the theater to collapse. The argument is reminiscent of the Air Force's prioritizing theater air warfare over tactical air warfare.

Soldiers and airmen also do not understand the importance of fleet movement as a defense against air and submarine attack. In naval warfare, knowledge of the enemy's position is everything. That is why the Navy is so advanced in its emissions control and data-link capabilities, compared to the other services. Once its position is known, the fleet may suffer a coordinated air and submarine attack. Further, a submarine moving slowly toward a fixed fleet anchorage is extremely difficult to detect. Thus, hiding and constant movement are vital defensive procedures for Navy fleets. For example, in the Korean War, Task Force 77 kept on the move until 1952, when it was sure that Red Chinese submarines no longer posed a threat. Even then, the task force's records show its concern about the relatively fixed ocean stations that were necessary to support an integrated air campaign with the Air Force. In Vietnam and Iraq, the lack of a serious naval threat again enabled the Navy to operate from relatively fixed ocean stations. Nevertheless, these naval defensive requirements led to misunderstanding among land and air forces.¹⁷

Will the Navy Submit to the Will of a Theater Commander from Another Service?

The Navy has always retained control of its fast-attack carrier fleet. In World War II, Korea, and Vietnam, the fleet worked in support of the theater commander. Consequently, the level of interservice coordination depended on harmonious relations among service commanders. However, the Goldwater-Nichols Act of 1986 ended independent Navy wartime missions and placed all operations under a joint commander. Although in previous wars the Navy generally succeeded in dividing up the theater into Navy-only areas of responsibility, in

the Gulf War it complied with the JFACC's integrated plan, although it reserved command and control of all fleet defense sorties for itself.

Does the Army Overuse Close Air Support as Flying Artillery?

The Army will use any air support it can get. Close air support as a percentage of total air sorties was 10 percent in World War II, 30 percent in Korea, and 45 percent in Vietnam. In Desert Storm, however, the percentage of fixed-wing CAS returned to 16 percent.¹⁸ Army doctrine emphasizes the fact that firepower kills and that CAS only supplements the massive amounts of artillery, rocket, and helicopter fire support used in land warfare.

Is the Army Developing Its Own Air Force?

In Vietnam and Iraq, helicopters became a decisive element of air power, acting as a partial substitute for fixed-wing CAS and proving their effectiveness in poor weather. As used by Army corps, attack helicopter brigades performed as an army air force. Air assault divisions are just an upgrade of traditional cavalry and airborne forces.¹⁹

Will the Army Ever Again Give Up Its Dedicated Air Power?

Joint Test Pub 3-03, *Doctrine for Joint Interdiction Operations*, identifies attack helicopters and surface-to-surface missiles as "pre-dominant weapons, systems, and forces to conduct interdiction" and acknowledges that

commanders of air forces will most often possess the superior capability to execute interdiction. Such a commander will normally be designated the

JFACC by the JFC and assigned the responsibility to conduct detailed execution planning and coordination of the overall interdiction effort.²⁰

However, TRADOC Pam 525-5, *AirLand Operations*, shows that the Army has no intention of losing control of its Apache and ATACMS forces. As a result, the Army is trying to regain control of interdiction in the "joint battle area" to ensure unrestricted use of these weapons to operationally shape the tactical battle. Furthermore, the Army argues that it must control ATACMS in order to respond immediately to the short-range tactical ballistic missile threat with counterbattery fire.

Will the Marine Corps Release Air Power to a Theater Air Campaign without Being Forced to Do So?

Prior to Desert Storm, the Marines had a long history of being separated from their air element during war. In Korea they fought hard in an unsuccessful attempt to wrest control of their aircraft away from Fifth Air Force. In Vietnam they argued against the decision of General Westmoreland and Admiral Sharp to centralize South Vietnam's air assets in 1968, even appealing to the Joint Chiefs of Staff. Although the Goldwater-Nichols Act limited their recourse in Desert Storm, they did reclaim control of 85 percent of their air assets by the outbreak of the ground war.

The Marine art of war emphasizes integrated combined-arms attack. Because Marines do not believe they are as effective using another service's air forces, they will probably not relinquish their air assets to a theater air campaign unless the JFC orders them to do so.

Does the Marine Corps Overuse Close Air Support as Flying Artillery?

As an expeditionary force, the Marine Corps is designed to be light and easy to project ashore. Consequently, their force structure for fire support is different from the Army's in that the Marines use naval

gunfire, fighter-bombers, and helicopters for firepower that would normally come from heavy artillery, which is not easily moved.

For this reason, the Marines have a justifiable requirement for heavier CAS support than that provided to an equivalent Army unit. The simple bolstering of Marine firepower with Army artillery introduces an untrained player into the highly integrated Marine combined arms team. Still, the Marine Air Wing was designed to provide all of the Corps's air power needs. In Korea, Vietnam, and Iraq, however, the defensive fighter cover provided by the Navy and Air Force allowed the Marines to use their aircraft strictly for CAS. This suggests that they probably do use more than their fair share of CAS.

Does the Marine Corps Understand Air Interdiction?

Although Marine histories emphasize the importance of preventing troop ships from getting to Guadalcanal and of isolating the beach-head at Inchon, until recently Marine doctrine did not emphasize deep battle. Only now are Marines considering deep operations and air interdiction as part of the operational level of war.

Does the Marine Corps Depend Heavily on Close Air Support because of Its Limited Experience with Antiaircraft Artillery?

There is considerable truth to the assertion that Marine Corps doctrine assumes limited exposure to antiaircraft artillery. For example, in World War II the Marines had to contend only with the relatively benign AAA environment in the Pacific theater, while the Army Air Forces faced Germany's heavy use of AAA in Europe.

However, in 1951 after the front lines stabilized in Korea, the Marines also suffered heavy losses to AAA. They countered by regularly using artillery fire to suppress gun defenses while Marine

aviators carried out CAS. Thus, instead of shying away from this mission in their doctrine and limiting their exposure to ground defenses, the Marines turned to a combined-arms solution by using their ground forces to provide defense suppression. Although the Marines saw little AAA in South Vietnam, they encountered heavy ground fire in the Gulf War, losing five AV-8B Harriers to shoulder-fired SAMs and AAA.²¹ In short, the Marines' experience with heavy ground fire has been intermittent and cannot compare with the AAF's experience in World War II.

However, because Marines believe that CAS is the primary mission of their air arm, they are willing to put their aircraft at risk. In contrast, the Air Force believes that CAS is not an optimum use of air power and that losing aircraft on CAS missions is a waste of scarce resources.²²

Bottom-Line Questions

A review of the above perceptions raises two questions. Is the JFACC a good idea? If not, is there something better?

Is the JFACC a Good Idea?

The doctrine that underlies the concept of a joint force air component commander reflects the Air Force's experience in three wars and was successfully put to the test in Operation Desert Storm. The JFACC brings the entire spectrum of theater air power and the expertise of senior airmen to the JFC and the ground component commander. Because the JFACC centrally plans and controls theater air warfare in support of the CINC's campaign, the CINC is better able to direct air forces to achieve war and campaign objectives through independent or auxiliary air action.

Furthermore, in an era of combined warfare and reduced budgets, centralized direction of shared air assets is critical. In combined warfare, the US will often be far better equipped to handle the enemy's advanced threats than will our allies. Likewise, in joint warfare, each service will have capabilities that the others may need but cannot afford. Clearly, one needs a JFACC to control the increasingly divergent air capabilities of our services and coalition allies.

However, one must consider two arguments that promote organic control of air forces in lieu of a JFACC. The first asks how one can fight a combined-arms war with a team whose players are constantly being changed. The second maintains that centralized control slows the ability of the ground commander to act before the enemy does.

A doctrine of combined-arms warfare seems best suited for future conflicts—witness Desert Storm, where we orchestrated land, sea, and air assets in a single campaign so that Iraq had to defend everywhere against everything. Likewise, this doctrine—which makes operational and strategic warfare so lethal—is equally effective at the tactical level. For example, we have seen that the Marine Air/Ground Task Force is an excellent example of a tightly trained team that is expert in combined-arms warfare at the tactical level. But, as is the case with all teams, if one player is out sick, the team suffers—regardless of how good the substitute is. For that reason, Marines do not want to fight battles with unfamiliar players who might cripple the synergism of the combined-arms team. In the future, warfare against combined-arms armies will test seams between air, land, sea, and space to find a weakness, just as armies in the past tried to attack weak links at division and corps boundaries. A weakly integrated air component could be the vulnerable link—and it will certainly be a tested link. Even if intense joint training corrects this problem, the slow reaction time that typifies JFACC control may prove fatal.

The Army trains its people to analyze a situation quickly and act before the enemy can respond. The JFACC interferes with a division or corps commander's ability to use chunks of air power to affect tactical and operational battles before an enemy can act. This is not to suggest that diverted air power is not responsive to a battalion's

immediate CAS needs—it is. Still, the corps commander has a need for immediate air strikes against tactical reserves or interdiction targets that cannot wait 48 hours for ATO tasking.²³ By using its own money to develop brigades of attack helicopters and ATACMs, the Army is sending a message that corps commanders need to control air power if they are to fight tactical and operational battles.

Is There a Better Idea?

Thinking in terms of alternatives to centralized control, one might consider dividing all tactical air units and placing them under corps, as is the case with the MAGTF and as was the case with the Army in the 1930s. Unfortunately, one would have to ignore the operational level of war.²⁴ In North Africa in 1943, the AAF tried to convince the Army that dividing air power into “penny packets” was wrong. As we have seen, the concept of centralized control became doctrine in FM 100-20 and was successfully tested in Europe for the duration of World War II. As far as the Air Force is concerned, centralized control of air forces is nonnegotiable; the Air Force would never divide its tactical air forces among the Army’s corps.

At the other extreme, one might consider having the JFACC assume control of all fixed- and rotary-wing aircraft, surface-to-surface missiles, and cruise missiles,²⁵ providing daily tasking of everything that flies. However, the Army and Marines would not be able to conduct combined-arms warfare, which is the heart of their current tactical doctrine and of their evolving operational doctrine. Clearly, the Army and Marine Corps would find this alternative unacceptable.²⁶

Perhaps the solution lies in integrating centralized and organic control. That is, I believe it would be possible for the JFACC to retain control of all theater air power but release decentralized execution down to a level that would satisfy the Army and Marine Corps, both of whom would reclaim their lost tactical air liaisons. Such a marriage of doctrines would work for two reasons. First, it is simply a better

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combined-arms doctrine for operational war since it emulates the successful command structure used in Europe during World War II. Second, it would be acceptable to all services involved because it does not run counter to their historical experience and does not compromise their current doctrine. Although this might appear to be a "purple solution," it is not. Instead, it is an attempt to turn what is becoming a zero-sum game into a win/win proposition for all services.

If the Air Force really wants the JFACC to be a theater air commander, then it should release the JFACC from daily tactical control over all fixed-wing aircraft operations and concentrate instead on the theater air battle fought by all air and space assets. In retrospect, I doubt that Air Marshal Sir Arthur Coningham envisioned the current ATO system when he insisted on having an airman control tactical air assets. It is probably time to take a step backward so air power can take two steps forward.

Notes

1. Because this offensive occurred after most American ground forces had gone home, Vietnam-era ground officers would not have learned this lesson.

2. According to Joint Pub 1-02, *Department of Defense Dictionary of Military and Associated Terms* (23 March 1994), *air superiority* is "that degree of dominance in the air battle of one force over another which permits the conduct of operations by the former and its related land, sea and air forces at a given time and place without prohibitive interference by the opposing force" (page 21). This definition also holds true for what I call *local air superiority*. It is also true of *general air superiority* although there are no restrictions on time and place. Note also that *air superiority* applies to air-to-air fighters, SAM and AAA systems, tactical ballistic missiles, helicopters, cruise missiles, and jamming systems that target airborne craft.

3. Air Force officers understand that air power may be required to blunt an enemy offensive, as was the case in the Korean War, the Vietnam War, and the Gulf War. Current Air Force training also teaches this lesson—witness the Agile Falcon war game played by students at Air Command and Staff College (ACSC), Maxwell AFB, Alabama. The game for 1991 simulated a Korean scenario. Any of the 44 ACSC seminars that attempted to bomb the cave revetments at North Korean air-

fields lost the game—Seoul was overrun. If, however, the student JFACC flew 50 to 75 percent of his or her sorties in CAS, BAI, and air interdiction, the ground component commander was able to stop the aggressor's thrusts short of Seoul.

4. Local superiority applies to the point in question for a specific period of time and is not permanent.

5. In Vietnam, SAC's B-52s supported COMUSMACV, not Seventh Air Force.

6. Maj Gen M. P. Sullivan, deputy commander for war fighting, for the commanding general, Marine Corps Combat Development Command, to distribution special, letter, subject: The Joint Force Air Component Commander and Command and Control of Marine Air/Ground Task Force, 9 March 1989, 7.

7. However, the tactical air commands were not assigned to each army. They routinely crossed army and even army-group boundaries as General Vandenberg and Air Marshal Coningham fought the theater air battle. The tactical air command level disappeared during the AAF reorganization of 1946, and tactical air forces assumed direct command of wings (formerly groups). Additionally, reorganization saw the creation of Tactical Air Command (absorbed by Air Combat Command in 1993) to command the US-based tactical air forces. This ensured Army support for an independent Air Force. Thus, Tactical Air Command was an echelon above a tactical air force, whereas in World War II a tactical air command was an echelon below a tactical air force. The Air Force's now-defunct air divisions were modern-day equivalents of the World War II air units that were assigned to an army.

8. FM 100-20, *Command and Employment of Air Power*, 21 July 1943, 11.

9. FM 31-35, *Air-Ground Operations*, August 1946, 14.

10. *Joint Training Directive for Air-Ground Operations*, 1 September 1950, 3.

11. FM 100-20, 12. In 1943 fratricide was not uncommon because air support in the contact zone occurred without the benefit of radio contact with a forward controller. Only later in the Italian campaign did modern CAS procedures emerge. Reservations about CAS have been toned down considerably in modern doctrine: "Airmen advising surface commanders must understand the operational difficulties in close air support, the importance of prompt exploitation by surface forces, and the risks involved for friendly surface and aerospace forces; all of which demand exacting command and control." AFM 1-1, *Basic Aerospace Doctrine of the United States Air Force*, vol. 1, 1 March 1992, 13.

12. AFM 1-1, vol. 2, 117.

13. *Ibid.*, vol. 1, 13.

14. Although the Air Force did dedicate tactical air commands to each Army during the campaign across France, most of the praise for CAS in this phase referred to "column cover" tactics. When the Army Air Corps used column cover, it was in essence using the same tactics the Marine Corps used in the Pacific theater.

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15. Prior to Vietnam, the Army actually had responsibility for CAS radio equipment.

16. Gen Robert D. Russ, "An Open Letter on Tacair Support," *Armor* 97 (May-June 1988): 45.

17. In Desert Storm, the threat of land-based Silkworm or Exocet attack did inhibit the Navy's Persian Gulf operations. The Navy argues that air campaign planners were either not sympathetic—or did not understand—its need to roll back shore defenses to bring the carriers in closer.

18. During the ground war (24-28 February 1991), 2,107 of 13,181 total sorties flown were for CAS. The Army was also employing AH-64 Apache helicopters, which fired 2,876 Hellfire air-to-surface missiles during the war. Eliot A. Cohen et al., *Gulf War Air Power Survey*, vol. 5, *A Statistical Compendium and Chronology* (Washington, D.C.: Office of the Secretary of the Air Force, 1993), 259; and Thomas A. Keaney and Eliot A. Cohen, *Gulf War Air Power Survey Summary Report* (Washington, D.C.: Department of the Air Force, 1993), 204.

19. Although helicopter transports of air assault divisions do not constitute a separate Army air force, they are vulnerable to ground threats and therefore require defense suppression and air superiority escorts.

20. Joint Test Pub 3-03, *Doctrine for Joint Interdiction Operations*, 11 December 1990, II-5, IV-3.

21. The Harrier loss rate during Desert Storm (1.5 aircraft per 1,000 sorties) was over three times higher than the average loss rates of either the Air Force (.4) or Navy (.5) during the war. Cohen et al., 680.

22. Once again, this is not to say that, to Air Force thinking, CAS in certain situations is not an effective use of air power. If CAS can provide campaign-level effects, then the Air Force will support it.

23. Although in Desert Storm, the JFACC provided interdiction retasking well inside the nominal 48-hour ATO window, this does not necessarily mean that the diversion of air interdiction sorties will be sufficient and timely enough to meet corps' air needs for tactical and operational warfare in the future.

24. From an airman's point of view, to be tied strictly to a corps is to deny the operational and strategic potential of air power. In some respects, the JFACC's current span of control already ignores the operational level of war since it excludes "aerospace platforms" that can fight the deep-operations battle: attack helicopters, air assault forces, and Army tactical missile systems.

25. Indeed, AFM 1-1's definition of *aerospace platforms* is the only place in the manual where one can infer what the Air Force means by *aerospace forces*: "Platforms used to exercise aerospace power include fixed- and rotary-wing aircraft, ballistic and cruise missiles, and satellites." AFM 1-1, vol. 2, 72.

26. Although the Army and Marine Corps had little effect on the operational battle 10 years ago, by the time Desert Storm was fought, they had developed weapon systems that had deep-operations capability.

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