AIR STAFF HISTORICAL STUDY

TEMPERING THE BLADE:
General Carl Spaatz and American Tactical Air Power in North Africa, November 8, 1942- May 14, 1943

Richard G. Davis

OFFICE OF AIR FORCE HISTORY
UNITED STATES AIR FORCE
WASHINGTON, D.C., 1989

AIR STAFF HISTORICAL STUDY

TEMPERING THE BLADE:
General Carl Spaatz and American Tactical Air Power in North Africa, November 8, 1942–May 14, 1943

Richard G. Davis
Air Staff History Branch

OFFICE OF AIR FORCE HISTORY
UNITED STATES AIR FORCE
WASHINGTON, D.C., 1989

Introduction

temper\'tem per\ *vb*\: to make stronger and more resilient through hardship: to put in tune with something.[1]

In the three and one-half years since its establishment in October 1985, the Air Staff History Branch has received numerous requests for information and background on the development of tactical air power from the Air Staff and from interested elements of the Army Staff. This special study, an extended excerpt from a forthcoming book on General Spaatz, entitled *GENERAL CARL A. SPAATZ AND THE AAF IN EUROPE, 1942-1945* (to be published in September 1990), presents the latest research on the air aspects of the campaign in North Africa, the foundry which tempered U.S. Air Force tactical airpower doctrine. Current and long standing USAF tactical airpower doctrine defines five combat functions for tactical airpower: counter air, close air support, air interdiction, tactical air reconnaissance, and tactical airlift operations. USAF doctrine adds that the governing principle for determining the priority given to each function is the neutralization of "the enemy threat having the most profound and continuing influence on the total mission of the area {theater} command." AFM 2-1 further notes, "all five combat functions are performed concurrently because they are mutually supporting."[2] While this study touches on all the combat functions of tactical airpower, it concentrates on three: air superiority, close air support, and air interdiction. As a bonus to the professional reader the study, also offers not only an in-depth analysis of the tactical air power experience of another major air service, the British Royal Air Force (RAF), but traces the influence of the RAF's thought on the emergence of USAF doctrine.

During the campaign in North Africa, the U.S. Army Air Forces in Europe and their commanding general, Carl A. Spaatz, met and overcame fundamental problems in the employment of air power. At

[1] _____, *Webster's Ninth New Collegiate Dictionary* (Springfield, Mass.: Merriam-Webster Inc., 1985), p 1213.

[2] Air Force Manual (AFM) 2-1, Aerospace Operational Doctrine, "Tactical Air Operations -- Counter Air, Close Air Support, and Air Interdiction" (Washington, DC: Department of the Air Force, 2 May 1969), Chap 3, Sec II, p 3-2.

the campaign's opening Spaatz left the task of introducing a strategic air force, the U.S. Eighth Air Force, to limited combat operations from a secure and logistically sophisticated base area, in England, to assume entirely different duties, in North Africa. There he directed combined Anglo-American strategic, tactical, and coastal air forces in the midst of sustained combat, at the end of an attenuated supply line. As the leader of tactical forces, Spaatz met and mastered three primary tasks of air in the support of ground operations--(1) the achievement of air superiority throughout the theater of operations and above the battlefield; (2) the interdiction of enemy supplies and reinforcements to prevent their utilization at the front; and (3) the provision of close air support to the ground forces.

The achievement of air superiority by the Allies required overcoming several factors which hampered their operations. If superiority could have been attained simply by comparing the number of machines available to the Allies and to the Axis powers, the Allies would have had superiority throughout the campaign. Mere numbers, however, were decisive only if all other factors, such as training, logistics, organization, doctrine, technical excellence of weapons, geographic position as well as the morale, combat experience, and condition of available manpower were equal. These variables had to be factored into any meaningful calculation of Allied versus Axis air strength throughout the campaign. When the initial Axis advantages are considered, the inability of the more numerous Allied air forces to achieve their goals becomes clear.

The delivery of close air support proved one of the most nettlesome problems because it depended upon the resolution of other shortcomings and on the personal relationships between the air and ground commanders. Close air support was the application of aerial firepower in coordination with the movement and fire of friendly ground formations against hostile targets in close proximity to ground combat operations. Successful close air support required the attainment of air superiority over the field of ground combat operations, and the maintenance of a mutual spirit of cooperation between the ground elements supported and the air forces providing support. During the early phases of the North African campaign the Allied air and ground forces could achieve neither air superiority, nor satisfactory teamwork. Consequently, from November 1942 through mid--February 1943 Allied close air support was ineffective.

The issue of interdiction proved far easier to solve. The complete dependence of the Axis powers on supplies transported to Africa from Italy, the few ports available to receive those supplies, shortage of suitable shipping, the limited number and constricted nature of the shipping lanes, and the paucity of protected air transport fields available made them extremely vulnerable to any logistical disruption. Allied breaking of Axis codes, which enabled precise tracking of

supply convoys and routes, added immeasurably to the ease with which Allied airpower could locate and attack the many weaknesses of the Axis logistical network. The problem of interdiction revolved more around obtaining sufficient air striking power to perform the task, than in the difficulty of the mission itself.

By utilizing his managerial, organizational, and above all, operational skills, Spaatz played a vital role in Allied tactical air power's reversal of the variables preventing attainment of air superiority. In the later stages of the campaign Spaatz used his skills to improve the teamwork necessary between the Allied air and ground elements. This teamwork was noticeably lacking in both the American and British components of the TORCH invasion force. As for interdiction, Spaatz was instrumental in keeping the heavy bombers on interdiction tasks and in disrupting the Axis air transport system. Spaatz's treatment of the three issues of air superiority, close air support, and interdiction and their ramifications constitutes the theme of this monograph.

Contents

Introduction iii

Contents vii

List of Maps viii
List of Charts viii

Chapter I: The Race for Tunisia 1

The Strategic Background 1
Initial Invasion Operations 16
Pre-North African American Air Support Doctrine 23
Operations November-December 1942 32

Chapter II: Failure and Reorganization 53

The Casablanca Conference 53
Operations, Personalities, and Teamwork 64
Reorganization and Kasserine Pass 75

Chapter III: The Collapse of the Axis Bridgehead 81

The Air War Against Axis Supply Lines 86
Heavy Bombardment Aviation in Tunisia 91
Ground Operations and Air Support 95
Spaatz and Changes in AAF Air Support Doctrine . . . 107

Glossary 121

Bibliography 127

Maps

Following page number

Map 1: The TORCH Area. 18
Map 2: Allied and Axis Airfields in Northern Tunisia. 22
Map 3: Eastern Algeria and Tunisia. 34
Map 4: Northern Tunisia. 66
Map 5: Southern Tunisia. 70

Charts

Following page number

Chart 1: Allied Chain of Command, January 5, 1943 68
Chart 2: Allied Chain of Command, January 30, 1943. 72
Chart 3: Organization of Allied Air Power, February 18, 1943. . . 78

Chapter I

The Race for Tunisia (November 1942 - January 1943)

> Perhaps the most glaring error in the higher planning was the decision not to have a unified Air Command. The separation of the Air Forces into two separate commands with two distinct areas of responsibility was a stab in the back from which they never recovered until they were re-organized under Air Chief Marshal Sir Arthur Tedder.[1]
>
> RAF Narrative History, c. a. 1950.

The Strategic Background

From early May to early November 1942 Major General Carl A. Spaatz (pronounced "spots") commanded the U.S. Eighth Air Force and all other U.S. Army Air Forces (AAF) units in the British Isles. He had two vital missions: conducting the American strategic bombing campaign against Nazi Europe and providing tactical air support for the eventual Anglo-American cross-channel invasion from England to Northern France. The 51 year-old regular army officer had spent 32 years in the U.S. Army, 26 of them as a flier. After graduating from the U.S. Military Academy, West Point, in the Class of 1914, Spaatz spent a year in Hawaii as an infantry officer and then transferred to the Aviation Section of the Army's Signal Corps. During World War I he established and commanded the largest American pursuit training school in France. At the end of the war he spent a

[1] Air Ministry, RAF Narrative,"The North African Campaign, November 1942--May 1943," N.D. (1950?), p 202, DS 20834/1(216).

month at the front, where he shot down three German aircraft. In the years between the two world wars Spaatz served in numerous important command and staff assignments. In those assignments he amply demonstrated his ability to accomplish the task at hand and further refined his skills in the direction of combat air formations. He also testified at the court-martial of General William Mitchell and participated in the flight of the *Question Mark*, a record-breaking endurance flight. In 1939 he became head of the Army Air Corps Plans Section where he helped to prepare the Army's air arm for mobilization and possible participation in the war in Europe. His close personal friend and mentor, Major General Henry (Hap) H. Arnold, the Chief of the Air Corps, sent him to England as an observer in the summer of 1940. In England Spaatz not only made valuable contacts with RAF officers, but sent back optimistic, accurate reports on the ability of the British to hold out against the Germans. Upon returning to the U.S., in September 1940, he resumed his planning duties and became the first Chief of the newly created Army Air Forces Staff in June 1941. Soon after the entry of America into World War II he was selected to lead the AAF contingent to England. His experience in training, broad command experience, and familiarity with strategic and production planning, as well as his friendly relationship with the RAF, his own seniority, and the trust of his superiors made him the obvious choice for the job.

Spaatz also possessed the personal qualities that would fit him for his assignment. Unlike many managers, Spaatz believed in delegating authority as well as responsibility. Once he assigned a task he gave his subordinates wide latitude to fulfill it. Spaatz loathed staff work. Consequently he ran his headquarters more like a household than a general staff. He and the immediate members of his staff, roomed, messed, and gamed together. Former Air Force Chief of Staff, General Curtis LeMay, who served under Spaatz in both the Pacific and European theaters of World War II, recalled many years after the war that he "never got any direct orders from General Spaatz on anything," but after a few hours of evening poker sitting at the same table he had a good idea of exactly what Spaatz wanted him to do.[2] Spaatz was very shy in public and spoke woodenly at staff meetings, never straying from the previously prepared text he brought with him. His shyness in public contributed to reputation for taciturnity, as did a dry and sardonic wit. Spaatz had little patience with professional military education or spit and polish. At West Point he finished 57th out of 107 in academics and 95th in conduct. He had

[2] Wayne Thompson (ed.), *Air Leadership: Proceedings of a Conference at Bolling Air Force Base April 13-14, 1984* (Washington, DC: Office of Air Force History, GPO, 1986), p 42.

a reputation for never cracking a book and escaped a court-martial from the academy for having liquor in his room on a technicality. Over twenty years later he graduated from the Army Command and Staff College near the bottom of his class and earned an unfavorable recommendation. His only apparent achievement at Leavenworth was construction of its first squash courts. He was not a systematic thinker, he operated intuitively. Yet his intuition served him well. Former President of the United States, Dwight D. Eisenhower, Spaatz's commanding officer in North Africa and Europe, called Spaatz "the best operational airman in the world" adding that Spaatz's decisions were "sound and he knew exactly what he was doing."[3] General James H. Doolittle, USAF retired, who served under Spaatz from 1942-1945 remarked, "he is perhaps the only man I have ever been closely associated with whom I have never known to make a bad decision. I don't know of any major decision he ever made that wasn't sound."[4]

Spaatz needed all his abilities to organize and field the Eighth Air Force. Kay Summersby, Spaatz's British female driver during the summer of 1942 and later General Eisenhower's driver and confidant, remembered Spaatz at this time as a "serious man, serious to the point of grimness, and certainly the hardest working man in the whole U.S. Army Air Force (sic)."[5] Even as he labored to field an effective force in England, Middle Eastern events drastically changed the Allies' strategic plans. German Field Marshal Irwin Rommel launched an offensive in the Libyan desert that, after fierce British resistance, captured the fortress of Tobruk, shattered his enemies, and sent them reeling back to El Alamein, Egypt, the last defensible position in front of the Suez Canal. The debacle in the Middle East, the locale of Britain's major effort against the European Axis powers, threatened one of the basic strategic underpinnings of the Eighth---that England would be the base for an Anglo-American ground offensive against Germany in either 1942 or 1943. Winston Churchill, already jolted by the disasters to British arms suffered at the hands of the Japanese in Malaya, Burma, and the East Indies, now needed to shore up a rapidly crumbling situation in the Mediterranean. Added strength for that theater could only come from forces designated for the cross-channel invasion; therefore, Churchill set out to

[3] Ltr Maj Gen Lawrance Kuter to General of the Army H.H. Arnold, 28 January 1945, The Library of Congress, Manuscript Division, Papers of Henry H. Arnold, Correspondence.

[4] US Air Force Oral History Project, Interview with Lt Gen James H. Doolittle, September 26, 1971, p 53. (K239.0512-793)

[5] Kay Summerby Morgan, *Past Forgetting* (New York, NY: Simon and Schuster, 1975), p 33.

divert them to North Africa. As he remarked in his memoirs, "During this month of July, when I was politically at my weakest and without a gleam of military success, I had to procure from the United States the decision which, for good or ill, dominated the next two years of the war." He had to ask the U.S. to abandon plans for a cross-channel invasion in 1942 and to undertake the occupation of French North Africa in the autumn or winter by a large Anglo-American expedition. "I had made a careful study of the President's mind and its reaction for some time past," remarked Churchill, "and I was sure that he was powerfully attracted by the North African Plan;" the time had come to shelve the cross-channel invasion "which had been dead for some time."[6]

For reasons of his own, Roosevelt needed American troops in action against the Germans in 1942,[7] if possible before the congressional election of November 1942. The President, although leaning toward the proposed North African operation, gave General George C. Marshall, the outstandingly talented U.S. Army Chief of Staff, and one of the strongest supporters of the cross-channel invasion, one last chance to convince the British Chiefs of Staff to carry out the cross--channel invasion in 1942.[8]

Marshall, Admiral Ernest J. King, the Chief of Naval Operations, and Harry Hopkins, Roosevelt's closest advisor, arrived in London on Saturday, July 18. They immediately closeted themselves with Eisenhower, Spaatz, and Admiral Harold R. Stark, the chief American naval officer in the British Isles. Over the weekend the Americans discussed a plan hurriedly thrown together by Eisenhower's staff revising the previous cross-channel invasion plans. This plan called for the establishment of a secure foothold on the Cotentin Peninsula of Normandy.[9] Eisenhower, who had been recommended for command of the American forces in Britain by his mentor, Marshall, supported the plan, as did Spaatz.

During the weekend Spaatz contended that a cross-channel invasion in 1942 had a better chance than one in 1943. He based his reasoning upon the condition and disposition of the *Lüftwaffe*. In July 1942 the German summer offensive had taken Sevastapol and broken through the Russian defenses toward Stalingrad. This offensive had absorbed the bulk of the *Lüftwaffe*'s resources and would obviously do so for several more months. During the winter months

[6] Winston S. Churchill, *The Second World War*, Vol.IV, *The Hinge of Fate* (Boston: Houghton Mifflin Company, 1950), pp 432-433.

[7] Maurice Matloff and Edwin M. Snell, *Strategic Planning for Coalition Warfare 1941-1942*, p 276.

[8] *Ibid.*, p 273

[9] *Ibid.*, p 278.

the *Lüftwaffe* could rehabilitate itself and would therefore be a much more formidable opponent in 1943 than in 1942.[10]

In the ensuing meetings with the British, Spaatz repeated this position,[11] but his and the rest of the Americans' effort failed to move the British. On the day of Marshall's arrival in England Churchill and the British Chiefs of Staff had met and unanimously decided that the fall 1942 cross-channel invasion "was not a feasible or sensible operation."[12] Since the British supplied the bulk of the resources for an early invasion, their refusal to play ended any prospect of carrying out the operation. When the American delegation reported this impasse to the President, he replied with a list of alternative operations acceptable to him. They all called for American action against the Germans, but Roosevelt indicated a preference for an operation against French North Africa. Marshall bowed to the inevitable and tentatively agreed to a combined U.S. and British invasion of French North Africa, code named TORCH. By July 30 Roosevelt and Churchill made their tentative agreement on a North African campaign firm.

The Allies' decision to invade French North Africa (TORCH) by November 1942 had important long-term and short-term effects. It undermined large scale U.S. heavy bombardment operations launched from the British Isles and postponed the cross-channel invasion until 1944. More immediately, TORCH or its ramifications required Spaatz to modify substantially his plans and expectations from mid-summer to the end of 1942 and beyond. On Thursday, August 6, Spaatz received a letter from Arnold detailing the final results of the Marshall-King-Hopkins mission to London:

1. The cross-channel invasion would be abandoned for the year.
2. The air buildup in Britain would continue.
3. TORCH would be executed.
4. More aircraft might be diverted to the Pacific.
5. A TORCH planning unit would be created in London.

Arnold postscripted the letter, "I have just agreed with General Marshall that Doolittle will go to England at once as Commander of Air Forces for Torch."[13] By selecting Brig Gen James H. Doolittle, Amer-

[10] Command Diary, Entry, 19 July 1942, the Library of Congress, Manuscript Division, The Papers of Carl Andrew Spaatz, Diary. A complete draft of Spaatz's "Air Plan to Support the Attack and Occupation of Cherbourg Peninsula" can be found in his Diary file.

[11] *Ibid.*, Command Diary Entry, 21 July 1942.

[12] C.O.S.(42) 75th Meeting (O) 18 July 1942, Minutes, 20 July 1942, PRO PREM 3/333/9.

[13] Ltr, Arnold to Spaatz, 30 July 1942, Spaatz Papers, Diary.

ica's reigning air hero, Arnold, at least, assured the AAF of extensive press coverage of its role in TORCH, whatever that role might be. Subject to Spaatz's and Eisenhower's approval of Doolittle, the Eighth had made its first contribution to the North African venture, its air commander. Doolittle had been slated to command the 4th Bombardment Wing (Medium) for the VIII ASC. He checked into WIDEWINGS the same day, August 6.

TORCH not only delayed the cross-channel invasion, it slowed the buildup of the Eighth. In mounting the North African invasion, the Allies had accepted the necessity of assuming a defensive posture in operations against the Germans from England. As a consequence, England for the time being no longer required a rapid buildup in air power to support a ground offensive. Finally, once the North African invasion got underway, it would consume further resources and shipping originally destined for England. All this meant that the U.S. bomber offensive mounted from England would start considerably later and with far less force than envisioned prior to July 1942.

The shift to TORCH disconcerted Spaatz. He felt that the Eighth was making great progress. He had even somewhat optimistically convinced himself that "the presence here now of 200 B-17's would be a major factor in crippling German air power and insuring air supremacy next spring."[14] In a letter to Arnold, he wrote "am much concerned about possible diversion of units from the Eighth Air Force. ... Regardless of operations in any other theater, in my opinion this remains the only area from which to gain air supremacy over Germany, without which there can be no successful outcome of the War."[15]

Four days before the Eighth's first B-17 raid over Europe on August 13, Eisenhower cabled Marshall that the current air plan, with which Generals Spaatz, George S. Patton (one of the ground force commanders), and Doolittle concurred, called for forming "the nucleus of TORCH Air Force from the Eighth Air Force--to be supplemented as necessary direct from the United States."[16]

Any planes sent direct from North America would also come from units allotted to Spaatz. Eisenhower required the Eighth to contribute two heavy bomb groups, three medium bomb groups, two P-38 groups and two Spitfire groups, one transport group, and one light bomb group. To make up these losses, Eisenhower asked for five additional heavy bomb groups for the U.K.

[14] *Ibid.*, Ltr, Spaatz to Arnold, 11 August 1942.

[15] *Ibid.*

[16] Chandler, *Eisenhower's Papers*, I, item 425, Msg, 1127, Eisenhower to Marshall, 13 August 1942, pp 464-465.

By August 18, Spaatz had been charged with the planning, organization, and training of a new air force, the Twelfth, code named JUNIOR. The Twelfth would command the AAF units assigned to the North African operation. He directed each of his various command headquarters to sponsor the creation of a corresponding unit of JUNIOR. On September 23, Doolittle assumed command with Col Hoyt S. Vandenberg as his chief of staff.[17] By October 24, the day the Headquarters 12th AF embarked for North Africa, the Eighth had supplied 3,198 officers, 24,124 enlisted men,[18] and 1,244 planes assigned to JUNIOR. Until well into January 1943, 50 percent of the Eighth's on-hand supplies and much of its maintenance work were devoted to the Twelfth. Well might Spaatz remark, "What is left of the Eighth Air Force after the impact of Torch? We find we haven't much left."[19]

The creation of the Twelfth Air Force proved the occasion for a disagreement between Spaatz and Eisenhower. On September 8 the two discussed the problems caused to the AAF, ETO, by having to raise the Twelfth while the Eighth simultaneously flew operational missions. Eisenhower solved the problem very simply. He ordered Spaatz to cease all the Eighth's combat air operations at once.[20] The next day Eisenhower cabled Marshall his proposals on how to conceal the halt.[21]

From Spaatz's point of view, Eisenhower's decision was the worst possible one. It delayed the entire AAF bomber offensive for an indeterminate period. The decision might even prove fatal to AAF hopes if the delay proved an opportunity to justify diversion of yet more AAF strength to subsidiary theaters. The effect on the morale of Eighth's service and combat personnel might also prove costly. Presumedly, Spaatz wasted no time in appealing to Arnold. On September 10, Arnold cabled Eisenhower, "you and Spaatz are urged to continue intensive air operations until the last possible moment as the Eighth Air Force is now accomplishing the mission for which it was intended: (a) draw the GAF from other fronts, (b) attract the attention of German fighters (c) reduce German war effort by bombing important targets."[22]

On the same Thursday, Spaatz presented Eisenhower with a draft cable which he wished to send to Arnold. In the cable Spaatz

[17] Craven and Cate, *Torch to Pointblank*, p 52.

[18] Craven and Cate, *Torch to Pointblank*, p 52.

[19] *Ibid.*, p 21, citing Minutes, CG, 8AF Commander's Meeting, November 10, 1942.

[20] Chandler, *Eisenhower's Papers*, I, p 550, n. 1.

[21] Chandler, *Eisenhower's Papers*, I, p 550, note 1 to document #492.

[22] Msg, Arnold to Eisenhower, 10 September 1942, Spaatz Papers, Diary.

forcefully expressed his disagreement with Eisenhower's order to halt operations. Spaatz was certain missions from North Africa could not be as effective against the *Lüftwaffe* and German war strength as those from the U.K. He stated in his opinion, "new operations jeopardize acquisition of air supremacy over Germany and may have serious effect on successful outcome of war."[23] Spaatz went on to state that air operations would be delayed at least two months. At Eisenhower's urging, Spaatz never sent the cable. Eisenhower modified his position, cabling Marshall: "Ground elements of U.S. Air Squadrons in U.K. that are set up for service in the expeditionary force are compelled to begin packing of equipment immediately. Nevertheless, provision is being made to carry on at least two bombing missions a week."[24] Apparently, Spaatz had convinced Eisenhower that the Eighth could devote maximum attention to organizing the Twelfth while continuing to bomb Europe. That was acceptable to Eisenhower as long as Spaatz realized that TORCH had over-riding priority. Once he had carried the point, Eisenhower allowed Spaatz to salvage the bomber offensive. Harsh Northern European weather nearly proved the *contretemps* unnecessary by limiting the Eighth's bombers to four raids in September, three in October, and eight in November. Although the rate of operations was only half that authorized by Eisenhower and far less than hoped for by Spaatz and Arnold, it at least gave the crews and commanders experience and probably kept some German attention focused on Northwest Europe.

While the Eighth continued to suckle JUNIOR, Spaatz pursued two courses of action with equal vigor. He provided unstinting cooperation in all phases of the Twelfth's growth while at the same time doing everything possible to maintain the Eighth as a viable fighting force capable of sustaining a strategic offensive against Germany. He failed in the latter but not through lack of effort.

Knowing that Arnold's views were identical to his own, Spaatz wrote a series of letters to his chief meant to supply him ammunition in his fight to nourish the AAF bomber offensive in the British Isles. Spaatz wrote of the unanimous British praise of the Eighth's bombing accuracy and stated, "I am more confident than ever before that the war can be won in this theater if we are permitted to carry out the policies which were built up under your command." Daylight precision bombing would be decisive provided the Eighth received an adequate force in time. "For God's sake," Spaatz exclaimed, "keep our Air Force concentrated here so we can polish off the Germans

[23] *Ibid.*, Draft Message, September 10, 1942.

[24] Chandler, *Eisenhower's Papers*, I, item 492, Msg. 2028, Eisenhower to Marshall, 10 September 1942, p 550.

and get on with the war."[25] In another testimonial three days later, Spaatz stated, "in so far as my advice is requested, and often when it is not requested, I have reiterated the folly of attempting to fight the war all over the World. In my opinion unless the powers that be come to a full realization of the necessity for concentration of the Air Forces in this theater, we stand an excellent chance of losing the war."[26]

Spaatz went on to say that the 3 raids the Eighth had flown so far had convinced him that accurate, high altitude bombing could be performed by unescorted bombers penetrating into the heart of Germany. Since TORCH meant ETO would become "a 100% air theater of operation," until the mounting of a cross-channel invasion, Spaatz stated that in conjunction with the RAF he needed only 20 heavy bomber groups (960 planes), 10 medium bomber groups (570 planes), 10 fighter groups (800 planes), 10 Photo reconnaissance/weather squadrons, and two transport groups (to carry supplies) in order to attain "complete aerial supremacy" over Germany within a year.

It would be unjust to say that Spaatz's and Arnold's advocacy of a continued air buildup in England stemmed from a desire to prove their air power beliefs at the expense of the remainder of the U.S. war effort. As their correspondence shows, they both genuinely feared a complete German victory over Russia or a stalemate on the Eastern Front which would allow the *Lüftwaffe* to recuperate and to redeploy to the west in the winter of 1942-43.[27] Although both were convinced of the feasibility of unescorted deep penetration bombing, neither believed such raids could succeed in the teeth of the entire *Lüftwaffe*, especially if the Germans started serious counter-bombing of England. Nor were their fears about the Russian situation unjustified, given the progress of the German summer offensive in Russia, which by late August had conquered Sevastapol, Voronezh, and Rostov, penetrated far into the Caucasus, and reached the Volga River a few miles above Stalingrad.

Roosevelt's August 24 request for production requirements necessary "for complete air ascendancy over the enemy,"[28] gave Arnold a chance to open a second front of his own in the war to mount the European Bomber Offensive. Arnold assembled a team of air planning experts to produce a new document for the allocation of the nation's economic assets toward aircraft production. This plan was

[25] Ltr, Spaatz to Arnold, 21 August 1942, Spaatz Papers, Diary.

[26] *Ibid.*, Ltr, Spaatz to Arnold, 24 August 1942.

[27] *Ibid.*, Ltrs, Arnold to Spaatz, 30 July 1942; Spaatz to Arnold, 24 and 27 August 1942.

[28] Craven and Cate, *Torch to Pointblank*, p 277, citing memo from the President to Marshall.

called Air War Plans Division plan for 1942 (AWPD/42). When he received the President's request, Arnold sent a priority cable to Spaatz ordering him to detail Brig Gen Hansell, one of the authors of the AAF's pre-war planning blueprint, AWPD/1, to Washington for an important conference. Hansell awoke Spaatz at midnight, August 26, to inform him of the message's contents. Spaatz and his staff worked until six in the morning to gather background material for Hansell.[29]

Spaatz and Eaker enthusiastically supported Arnold's attempt to re-focus American strategic thinking. Spaatz decided to send Eaker along with Hansell because he recognized the "vital importance of the forthcoming decision.

Hansell," stated Spaatz, "is thoroughly familiar with my ideas," and "Eaker's ideas as of operations, etc., exactly parallel mine." He continued, "I hope the idea can be put across that the war must be won against Germany or it is lost. The defeat of Japan, as soul--satisfying as it may be, leaves us no better off then we were on Dec. 7. The war," he concluded, "can be lost very easily if there is a continuation of our dispersion. It can be won and very expeditiously if our effort is massed here and combines its strength with the RAF."[30] Although Arnold could not get Eaker in to see the President he did have Eaker make presentations to the Chief of Staff and the Secretary of War. Arnold remarked to Spaatz, "our major program is more or less bogged down due to the diversity of interest. It has been dispersion, dispersion, and more dispersion in our unity of thought for the main effort."[31] Arnold informed Harry Hopkins that the frittering away of air and resources had sapped AWPD/1. Arnold plead for a revival of AWPD/1 because, "it represents the only way in which we can vitally affect the No.1 enemy at once. Given twenty heavy groups of bombers -- 700 bombers -- operating from U.K. bases this fall and winter, I believe that we can prevent the rehabilitation of the German Air Force this winter." Arnold further promised to dislocate or depreciate the German submarine effort by destroying the five U-boat bases in Southwestern France.[32] Failure to deliver on those promises would cost Arnold in a coinage he could ill afford, credibility. Likewise, having painted himself into corners with such promises, Arnold's pressure on his subordinates to perform became more understandable, as did his penchant for counting raw numbers of aircraft in a theater instead of only those operationally ready.

[29] Command Diary entry, August 26, 1942, Spaatz Papers Diary.

[30] Ltr, Spaatz to Arnold, 27 August 1942, Spaatz Papers, Diary.

[31] Ltr, Arnold to Spaatz, 3 September 1942, Spaatz Papers, Diary.

[32] Memo, Arnold to Hopkins, Subj: "Plans for Operation Against the Enemy," 3 September 1942, "Mr Hopkins," Arnold Papers, Box 43.

AWPD/42, issued September 9, was the AAF's official response to TORCH and to Navy demands in the Pacific. In its strategic intent AWPD/42 closely resembled AWPD/1. AWPD/42 expressed the belief that conducting simultaneous effective air offensives against both Germany and Japan was impossible with the resources available. Because the vital industrial areas of Imperial Japan were currently out of range of American aircraft, Europe had to be the target for the one offensive that could be launched.

The projected offensive would destroy the German war economy by combining an American force of 2,225 operational bombers, based in England and deployed by January 1944, with RAF Bomber Command. The AAF would concentrate on the "systematic destruction of vital elements of the German military and industrial machine through precision bombing in daylight," while the RAF would specialize in "mass air attacks of industrial areas at night to break down morale."[33] In addition AWPD/42 called for priority production of large numbers of aircraft, which clashed head on with the Navy's projected ship building programs and the Army's anticipated heavy equipment requirements.[34]

When the U.S. Joint Chiefs of Staff met to discuss the availability of the fifteen groups (two of them heavy bombers) promised by Marshall to King in mid-July 1942 and destined for the Pacific, Arnold used AWPD/42 as the basis for his argument in favor of delay. The Navy objected and the battle was joined, finally to be decided by the President. Roosevelt, in typical fashion, gave each side half a loaf; the Navy got the groups for the Solomons Campaign, but AWPD/42's basic assumptions and all but 8,000 of its production requirement of 139,000 planes in 1943 were approved. By the end of the year production realities reduced the aircraft goal to 107,000 in 1943.[35]

In conjunction with AWPD/42, Arnold asked Spaatz to enlist the aid of key commanders in the ETO for the AAF position.[36] Spaatz dutifully complied, producing messages from Patton, Clark, and Eisenhower. Eisenhower's message to Marshall, of September 5, shows Spaatz's handiwork. Eisenhower wrote "we are becoming convinced that high altitude daylight precision bombing is not only feasible but highly successful and that by increasing the scale of

[33] Craven and Cate, *Torch to Pointblank*, pp 277-279.

[34] *Ibid.*, p 290.

[35] Craven and Cate, *Torch to Pointblank*, pp 290-295.

[36] Ltr, Stratemeyer (Arnold's Chief of Staff) to Spaatz, 25 August 1942, Spaatz Papers, Diary.

attack, effective results can be obtained."[37] Eisenhower then went on to request the twenty heavy, ten medium, and ten fighter groups which Spaatz had already determined would be needed. This cable so pleased Arnold that he informed Marshall, "I believe that this cable is of such great and immediate importance as to warrant the presentation of its contents to the President and to the Joint Chiefs of Staff." Arnold further requested that Marshall himself make the presentations to enhance its effect.[38] Apparently Marshall complied, which, of course, added his prestige to the contents--making them seem less self-serving than if Arnold had touted them himself.

TORCH not only siphoned off operational groups from the Eighth, it changed the Eighth's bombing priorities. Trans-Atlantic shipping formed the centerpiece of the logistics planning for TORCH. Those ships were also the objectives of both the German and Allied navies in the Battle of the Atlantic, which was still in doubt in September-November 1942, as German submarines continued to sink Allied shipping as fast as it could be produced. This led to the decision to order the Eighth to embark on a campaign against German submarine bases in France, in particular those at Brest, St. Nazaire, L'Orient, Bordeaux, and La Pallice. The suppression of those bases would ease the pressure on the Allied navies and increase the chances of safe passage for the TORCH convoys as they sailed for North Africa.

After preliminary discussions beginning at least as early as September 25, Eisenhower, on October 13, ordered Spaatz to consider the submarine pens and bases as his top priority targets. The same memo requested Spaatz's estimate of the size of the attacks which could be mounted and the extent of British cooperation expected.[39]

The next afternoon, Spaatz met with Air Marshals Arthur Harris and Portal to discuss Eisenhower's memorandum. They agreed that RAF Bomber Command lacked the equipment to precision bomb the sub bases during the day and that night bombing would be ineffective. Therefore, the RAF would bomb submarine manufacturing installations in Germany, while the Eighth would hit the sub pens.[40] At the time it seemed a task perfectly suited to the limited reach and punch of the American bomber forces. Spaatz, Eaker, and Arnold apparently accepted the new priority with no objection. The *Lüftwaffe* would certainly defend the sub bases, which would start the battle of

[37] Chandler, *Eisenhower's Papers*, I, item 485, Msg. 1812 Eisenhower to Marshall, 5 September 1942, pp543-544.

[38] *Ibid.*, p 544 text given in note to above cable.

[39] Memo, Eisenhower to Spaatz, 13 October 1942, Spaatz Papers, Diary. Also see Command Diary entry, 25 September 1942.

[40] *Ibid.*, Command Diary entry, 14 October 1942.

attrition in earnest, thereby realizing the AAF's desire to draw the *Lüftwaffe* into combat and destroy it. Only later did the AAF's lack of proper ordnance (it had no bombs heavy enough to penetrate the massive concrete roofs of the sub pens) and the AAF's fallacy of concentrating on a limited and predictable set of targets, which allowed the *Lüftwaffe* to concentrate its anti-aircraft artillery and fighters to protect a relatively few targets, become painfully obvious.

In a letter to Spaatz, dated September 3, Arnold first developed a theme, which, with later embellishment, he would sound well into 1943. As with so much else, TORCH was its inspiration. "Please understand," he wrote, "that the decision for undertaking the special operation is now completely out of my hands and it is upon that basis that I have insisted that it and the United Kingdom operations are complementary." Since TORCH could not be averted, perhaps it could be deflected or at least be made to serve the other AAF goals. TORCH should go forward with all possible support; therefore any units which helped to ensure the success of the North African venture, such as the Eighth, should be as strong as possible too.[41]

Arnold soon concluded that coordination of the efforts of the Eighth and Twelfth would best be accomplished by having a single USAAF commander supervising operations in both England and Africa. That officer would be directly subordinate to the overall U.S. commander, Eisenhower. Arnold also concluded, *pari passu*, that only one man had the proper qualifications for the post--Spaatz. As Maj Gen George E. Stratemeyer, Chief of the AAF Staff, noted, Arnold had expressed a desire for Spaatz to remain at Eisenhower's side wherever he went, in order to provide him with AAF advice. Stratemeyer told Spaatz, "you really should be designated as the Commanding General, American Air Forces in Europe," not just of the ETO. Such "a request to place you in that position should come from Eisenhower, and I am sure that it would be approved here."[42] Spaatz talked the suggestion over with Eisenhower, but then rejected it.[43] The Eighth Air Force chief objected to additional diluting of the already thin ranks of experienced staff officers by piling another headquarters on top of the existing ones. Nor was this an idle objection. Throughout the war, the achilles heel of the AAF was its shortage of adequately trained staff officers.[44]

Although Eisenhower had initially agreed with Spaatz that an overall American air commander was not needed, he gradually came

[41] *Ibid.*, Ltr, Arnold to Spaatz, 3 September 1942.

[42] *Ibid.*, Ltr, Stratemeyer to Spaatz, 17 September 1942.

[43] *Ibid.*, Ltr, Spaatz to Stratemeyer, 25 September 1942.

[44] See Craven and Cate, *Torch to Pointblank*, pp 633-634, for a brief discussion on this problem.

to side with Arnold, but for his own reasons. Eisenhower accepted the AAF's contention that a bombing offensive should be waged from England. He just felt it should come after the conclusion of TORCH. He favored immediate strengthening of the Eighth because he intended to use it as a reinforcement pool for North Africa.[45] Eisenhower also observed that once bases were set up along the African Mediterranean littoral, Africa and England would then form a "single air theater," a theater in which air power could be concentrated at any point to take advantage of weather conditions or strategic opportunity.[46]

On the 29th Eisenhower requested Spaatz's support for his own plan of a unified AAF command "from Iceland to Iraq." Apparently Eisenhower had obtained clarification from the War Department concerning its thoughts on a unified command. A single U.K.-North African theater would help to keep resources from the Pacific, an appeal which two separate theaters competing against each other would lack. Eisenhower informed Spaatz that if TORCH succeeded, so that a unified command was possible, he intended to place Spaatz in the position of "Supreme Commander of all U.S. Army Air Forces which come under his command, and to advocate the inclusion of U.S. Army Air Forces in the Middle East also in that same command."[47] Finally, he instructed Spaatz to prepare a plan for the implementation of his proposal within thirty days.[48]

By the eve of the invasion, which started on November 8, 1942, Spaatz seems to have resigned himself to being Eisenhower's chief air officer. He would far rather have stayed in England to direct the Eighth Air Force. Arnold enthusiastically supported the idea of Spaatz joining Eisenhower. In a series of mid-November letters, he and Stratemeyer urged Spaatz's appointment. On November 13, Stratemeyer wrote Spaatz, "you should get yourself appointed as overall commander of his Air Force."[49] Two days later, Arnold added in a letter to Spaatz, "with all due respects to everybody concerned you are sidetracked." "In my opinion," stated Arnold, "this whole problem of air operations in Europe must be controlled by one man."

[45] Chandler, *Eisenhower's Papers*, I, item 530, pp 587-589, Msg, 2867, Eisenhower to Marshall, 29 September 1942, pp 587-589. This cable is a substantial revision of a draft cable given to Eisenhower by Spaatz. Eisenhower's support of AWPD/42 was hardly the ringing endorsement the AAF would have liked him to accept. Apparently Spaatz's draft came directly from Arnold. Spaatz's diary contains a copy of the draft.

[46] *Ibid.*, item 538, Ltr, Eisenhower to Marshall, 7 October 1942, pp 598-601.

[47] Digest of a Conversation between General Eisenhower and General Spaatz, WIDEWING, 1700, 29 October 1942, Spaatz Papers, Diary.

[48] *Ibid.*

[49] *Ibid.*, Ltr, Stratemeyer to Spaatz, 13 November 1942.

"Are you in a position in England," he asked, "to give the best advice to Eisenhower in Gibraltar on such matters?" Finally, Arnold observed, "it appears to me that if something is not done we will find the air being used more as a support for the ground arms than it should be, particularly so, when *if there ever was a time to use it strategically that time is now* (author's italics). It may be that you should take a trip down to see Eisenhower and talk this matter out."[50] The same day, Arnold wrote to Eisenhower, "Sticking my neck out considerably, I suggest that you have Tooey join you at your present headquarters."[51] Finally, Stratemeyer put it most succinctly, "You should be in Ike's pocket."[52] All of the above illustrated Arnold's perception of Eisenhower as the most important and influential American officer in Europe (Eisenhower's European Theater of Operations command included all U.S. Army and Army Air Forces units assigned to Iceland, to the United Kingdom, and to North Africa.)[53] Arnold's and the AAF's best interests lay in providing him with the finest possible guidance and advice on air matters. Naturally, in Arnold's opinion, only Spaatz could give that advice.

Stratemeyer's last exhortation proved unnecessary. By the time Spaatz received it, he had already flown to North Africa to inspect the Twelfth and from there on to Gibraltar, where he met with Eisenhower and accepted the job as Theater Air Commander. Eaker moved up to command the Eighth Air Force.

At a meeting at Headquarters, Eighth Air Force, on November 23, Spaatz explained to his staff the general function of the new theater air command. He saw its chief duty as strategic control and not operational or administrative control. The organization would be as follows:

I. Eighth Air Force (command all U.S. Air Forces in UK)
II. Twelfth Air Force (command all U.S. Air Forces in North Africa)
III. Iceland air forces.

The theater air forces commander would exercise technical supervision and control of units attached to ground forces. General directives would be issued:

1. on strategic bombing,

[50] Ltr, Arnold to Spaatz, 15 November, 1942, Spaatz Papers, Diary.

[51] Ltr, Arnold to Eisenhower, November 15, 1942, cited in "notes and Extracts from Spaatz Diaries--1942," Spaatz Papers, USSTAF File.

[52] Ltr, Stratemeyer to Spaatz, 20 November 1942, Spaatz Diary.

[53] *Ibid.*, Command Diary Entry, 23 November 1942.

2. on allocation of units to the Eighth and Twelfth Air Forces,
3. that medium and heavy bombers would be prepared at all times in each air force for support of special operations in either theater.[54]

The questions of the final operational objectives and strength of the Eighth and Twelfth Air Forces and the organization of a combined Allied air command would only be settled after the successful initial landings in North Africa. But at the end of November 1942, it probably appeared to Spaatz that he had guaranteed the attainment of the strategic goals of AWPD/1. He had gained a position from which, subject to Eisenhower, he could direct the strategic bombardment of German-occupied Europe from any point from London to Baghdad. He could also concentrate his forces to operate in the area most favored by the weather, wherever it may be in his vast command.

Disillusionment would soon come in muddy Tunisia.

Initial Invasion Operations

On November 8, 1942, three Anglo-American task forces landed in French North Africa. After overcoming half-hearted French resistance they occupied their initial objectives--Casablanca, Oran, and Algiers. Fortunately, the Allies found Admiral Jean Francois Darlan, the Commander-in--Chief of the Vichy French armed forces and number two man in Marshal Petain's regime, in Algiers, in the midst of an inspection trip of France's colonial possessions in Africa. Darlan ordered all French forces to cease fighting on November 10. The Nazi invasion of unoccupied France, part of the German response to the North African invasion, led Darlan to agree to place French military forces under Eisenhower's command and to order the French civil administration to co-operate with the Allies. This agreement, signed on November 13, secured Morocco and Algeria for the Allies and allowed them to turn their energies toward the liberation of Tunisia, much of which the Axis had taken over from the Vichy French at the start of the invasion. The Axis Powers, aided by the confusion and inaction of the Vichy French government in Tunisia, rushed to forestall the Allies by hurrying troops and equipment across the narrow stretch of the Mediterranean separating Sicily and Cape Bon, Tunisia.

The stresses engendered by the race to acquire Tunisia revealed weaknesses in Allied logistics, organization, and doctrine, particularly

[54] *Ibid.*, Command Diary Entry, 23 November 1942.

in the area of air power. In pre-invasion planning, AAF personnel played a minor role. The chief Army and Navy planners had limited them to providing air details concerning tactical support to the invasion task forces, rather than to the employment of air power in the Mediterranean at large. Ten days prior to the operation's start, Spaatz remarked to Doolittle that he had never understood "what, when, and where," about the Twelfth Air Force.[55] The AAF planners did, however, convince Eisenhower on one point--the British and American air forces should be commanded directly by Eisenhower rather than by an air commander-in-chief subordinate to him.[56]

The original invasion plan had called for an overall air commander "but," stated Eisenhower," I accepted representations made to me, principally by American airmen in whom I had the greatest confidence, that the projected use of the American and British air forces involved such a wide geographical dispersion that unified Command would be impracticable."[57] If this advice did not come directly from Spaatz, and it probably did, he, at the very least, sanctioned it. Nor was it inconsistent with his thinking. The abortive air plan for the fall invasion of France prepared by Spaatz and presented by him to the Combined American and British Chiefs of Staff (CCS) during the King-Marshall-Hopkins mission of July 1942 provided for an organization exactly like the one adopted by Eisenhower for TORCH. The July plan explicitly admonished, "there must be no subordination of U.S. Air Units, and no attachment to R.A.F. units." Instead the plan specified, "there will be unity of command through the Task Force Commander. He will use his two air forces, British and American, as a Corps Commander would use two division commanders, without subordinating one to the other."[58] Even when the two air forces operated in the same area, let alone widely separated ones, the AAF would not subordinate itself to the RAF. This failure to set up a combined air command before the invasion hamstrung the efficient application of Allied air power during the first crucial month of the campaign.

[55] Craven and Cate, *Torch to Pointblank* p 54 citing 30 October, 1942 Doolittle--Spaatz meeting.

[56] James L. Cash, "The Employment of Air Power in the North African Campaign," 9 October 1951, p 80, Office of Air Force History Archives, Doc# K612.549-1, citing General of the Army Dwight D. Eisenhower's Report to the CCS on Operations in the Mediterranean Area, 1942-1944 (Part I. Northwest African Campaign, 1942-43), p 54-55. Cash's work consists of a compilation of extracts of key documents from the campaign.

[57] *Ibid.*

[58] Memo, "Air Plan to Support the Attack and Occupation of Cherbourg Peninsula," N.D. (c.a. 19 July 1942), Spaatz Papers, Diary.

Spaatz had erred in his resistance to possible RAF domination. Although understandable in the context of a commander setting up a fledgling force, in this instance his loyalty to the AAF weakened his military judgement. Of course, the example of General John J. Pershing, the commander of the American Expeditionary Forces to Europe for World War I, haunted the command and control planning. Save for a few cases of extreme emergency, Pershing had adamantly refused to place his forces under the command of his French or English Allies. This attitude naturally influenced the U.S. Army leaders of World War II, who had served their apprenticeships in the ranks of Pershing's forces. Nonetheless, the U.S. Army and Navy had consented to combined commands with their British opposite numbers, while the AAF, for whatever reason, had not.

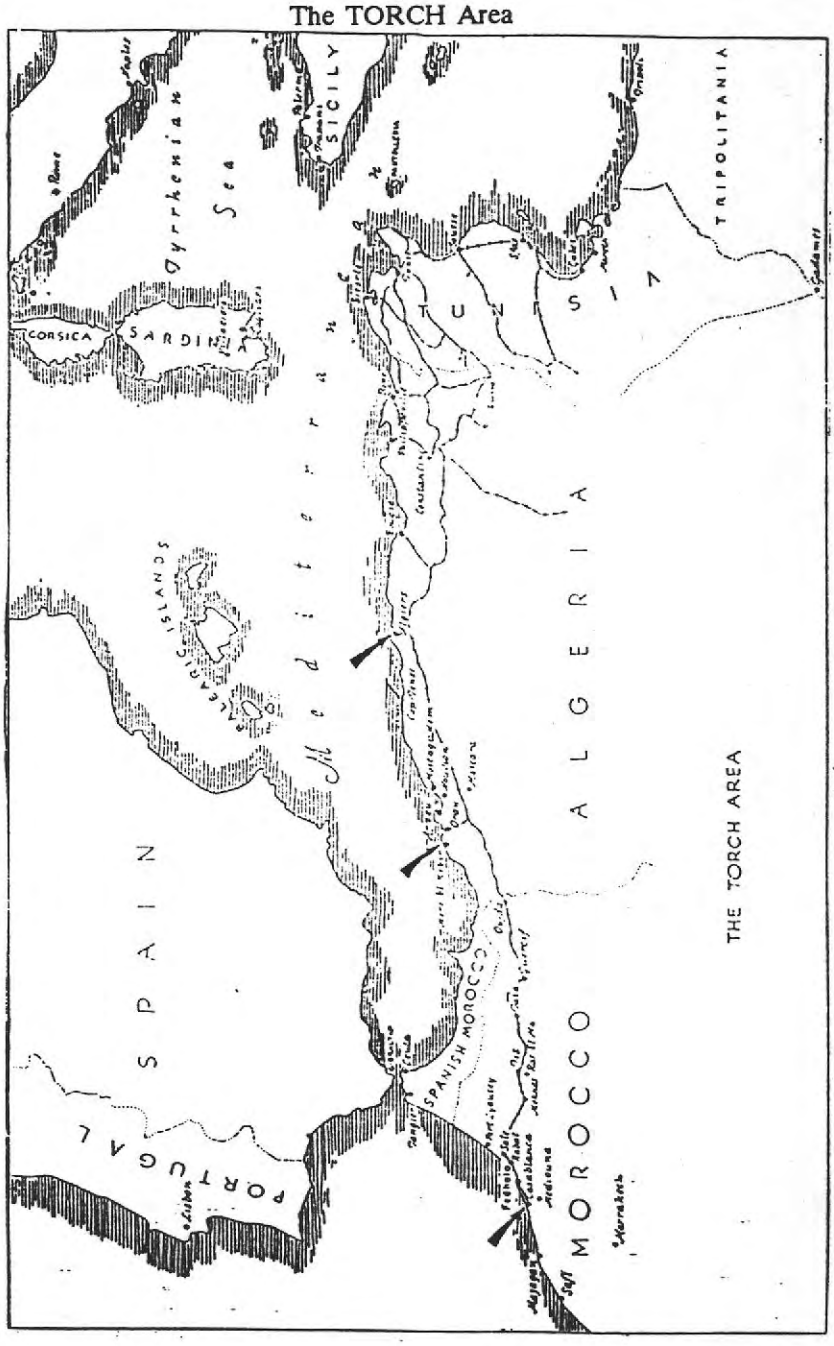
For the landing phase of the invasion, the inexperienced Twelfth Air Force, designated the Western Air Command, assumed responsibilities for supporting the Casablanca and Oran task forces, both composed entirely of American forces. Plans called for the Twelfth to attain an eventual strength of 1,244 aircraft, including 282 in reserve. The combat experienced RAF supplied the Eastern Air Command (EAC) to assist the chiefly British Algiers task force. The EAC had a planned force only one third the size of the Twelfth (454 planes of all types), many of them short-ranged Hurricane and Spitfire fighters. The smaller EAC also had responsibility for air operations to the east of Oran, including Tunisia. Once French North Africa capitulated and Fascist Spain appeared quiescent, which released Allied forces assigned to watch it, the Twelfth had no strategic role other than that of supporting the drive on Bizerta.[59] Although the Allies had expected this eventually, the prospect nevertheless presented severe difficulties. Doolittle's Twelfth Air Force would have to deal with the limitations of geography and its own lack of organization, which included the inexperience of its personnel (from general to private), inadequate intelligence, and faulty communications.

Inexperience hampered the AAF's effectiveness. Twenty-nine years later Doolittle admitted, "I was a brand new Air Force commander, and I had never commanded anything bigger than about a flight prior to that time, so there were a great many things I had to learn, and I endeavored to learn them very rapidly. For one, I had to learn my job, and I worked real hard at learning it."[60] Doolittle, the short, stocky, 45-year-old son of a carpenter, had a devil-may-care image that masked a man of surprising substance. In the 1920s and 1930s he won several international airplane speed races, including

[59] Craven and Cate, *Torch to Pointblank*, p 54.

[60] United States Air Force Oral History Program, Interview of Lt Gen James H. Doolittle, September 26, 1971, p 49.

Map 1:
The TORCH Area



SOURCE: Craven and Cate, *Torch to Pointblank*, p 44.

the Schneider Trophy for seaplanes in 1925, the first Bendix Trophy for transcontinental speed in 1931, and set a new speed record in taking the Thompson Trophy in 1932. As one of the most famous pilots of his day he had the same aura of technological mystery and death defying courage that clings to modern day astronauts. Doolittle had also showed bad judgement. On a South American flight in 1926 he consumed too much alcohol in Santiago, Chile, started to perform handstands in the room and then on the second story window ledge, which gave way plummeting him to the ground and giving him a pair of broken ankles. Showing great physical courage, and aware of what would happen to his career and reputation if he failed to complete the trip, Doolittle finished the journey, including air shows and stunts, by flying in leg casts. Doolittle engaged in wing-walking and on one occasion sat on a biplane's wheel spreader or axle while it landed.

Unlike much of the AAF's leadership Doolittle was not a career officer or a West Pointer. He joined the Army in April 1917, transferred to the Aviation Section, and served for 13 years, until early 1930, before resigning to join Shell Oil. While in the Air Corps he earned a PhD in Aeronautical Engineering from the Massachusetts Institute of Technology. At Shell Doolittle worked for the development of 100 octane aviation fuel, a prerequisite for the advanced and more powerful piston driven engines, which would equip U.S. aircraft in World War II. Recalled to duty as a major on July 1, 1940, he acted as a trouble shooter at various aircraft plants. In late January 1942 Arnold assigned Lt Col Doolittle to command Special Project No. 1, a combined Army-Navy effort to bomb Tokyo with Army bombers flying from a Navy aircraft carrier.

"Doolittle's Tokyo Raid," 16 B-25s launched from the *U.S.S. Hornet* on April 18, 1942, once more catapulted Doolittle into national prominence. He again demonstrated his great physical courage by leading the flight and taking off with the shortest off run. He displayed the ability to take a calculated risk and had also shown the moral courage needed for high command, when he had accepted the responsibility of ordering the flight to leave early, lengthening the journey from 400 to 650 miles, when a Japanese picket boat spotted the Navy task force before the planned launch time. Rewards followed. The AAF and the nation, saddened by the surrender of U.S. and Filipino forces in Bataan in early April, rejoiced over a real live hero. By May 5, the day before the surrender of Corregidor in Manila Bay, he was a brigadier general, without having been a colonel. On May 19 President Roosevelt pinned a Congressional Medal of Honor on his chest. Arnold assigned him to command the Eighth Air Force's 4th Bombardment Wing, a medium bomber wing in process of forming up. When the Anglo-Americans agreed on the North African invasion, Arnold reassigned him to command the Twelfth Air Force, which in

the initial planning had not been large, but grew substantially as the invasion grew. Doolittle was definitely a man of parts--most of them excellent.[61]

But for all his abilities Doolittle failed to gain Eisenhower's confidence. Although in time he came to trust the jaunty Tokyo Raider, in November 1942, Eisenhower felt, as he wrote in his post-war memoirs, "It took him (Doolittle) some time to reconcile himself to shouldering his responsibilities as the senior United States air commander to the exclusion of opportunity for going out to fly a fighter plane against the enemy."[62] Doolittle and Eisenhower's first meeting, sometime shortly after Doolittle's arrival in the UK on August 6, had proved disastrous for Doolittle who managed to convince Eisenhower only of his brashness and his ignorance of the job.[63]

Although the AAF official history implies Eisenhower's acceptance of Doolittle as the American air commander for TORCH prior to August 6, it must have been a tenuous agreement.[64] On September 13, Eisenhower wired Marshall that he personally preferred and strongly recommended Eaker for the command of the Twelfth. He suggested Doolittle for the XII Bomber Command or command of the air supporting the Casablanca invasion force. The next day Eisenhower suggested to Marshall that he would also find Maj Gen Walter H. Frank, the CG, VIII Air Service Command, equally acceptable. Both Frank and Eaker had already gained invaluable experience in establishing and preparing an air force for a major operation.[65]

Eisenhower's second message passed Marshall's reply to the first. Marshall gave Doolittle an exceptional recommendation, "Arnold and I both feel very strongly that Doolittle is a much more effective organizer and leader for the U.S. air force and Casablanca. He is a leader par excellence and both highly intelligent and strongly persistent in work of preparation." Marshall had just finished taking Doolittle on a trip to the West Coast and noted as a result, with "his

[61] Doolittle badly needs a good biography. The present works on him range in quality from execrable to acceptable. The most useful biography is Lowell Thomas and Edward Jablonski, *Doolittle: A Biography* (Garden City N.J.: Doubleday & Company, Inc., 1976). Also see, if you must, Quentin Reynolds, *The Amazing Mr. Doolittle* (New York, N.Y.: Appleton-Century-Cross, 1953) and Carroll V. Glines, *Jimmy Doolittle, Daredevil Aviator and Scientist* (New York, N.Y.: Macmillan and Co., 1972).

[62] Dwight D. Eisenhower, *Crusade in Europe* (Garden City: Doubleday & Co., Inc., 1948), p 122. In the same paragraph Eisenhower noted that Doolittle "became one of our really fine commanders."

[63] Doolittle interview, September 26, 1971, pp 42-43.

[64] Craven and Cate, *Torch to Pointblank*, p 51.

[65] Msgs. 2161 Eisenhower to Marshall, 13 September 1942 and 2181 Eisenhower to Marshall, 14 September, Eisenhower Pre-Presidential Papers, Eisenhower Presidential Library, Abilene Kansas.

combination of industry, intensity, technical knowledge and level headed bearing he greatly impressed me as probably the outstanding combat leader type in our Air Corps."[66] Marshall added that despite what he had just said, the decision was, of course, up to Eisenhower. A few days later Marshall had a note hand delivered to Eisenhower. The Chief of Staff informed him that he had Marshall's full confidence and approval of everything he had done save two actions. Eisenhower's recommendation of Frank instead of Doolittle would have been "a tragic error," and Marshall was even more concerned by the choice of Maj Gen Russell P. Hartle to command the Center (Oran) Task Force for TORCH. Marshall offered to send any of eight other generals.[67] Eisenhower selected Maj Gen Lloyd R. Fredendall and retained Doolittle. On September 23 Doolittle officially assumed command of the Twelfth.

It took more months of hard work on Doolittle's part to change Eisenhower's opinion. The remainder of the Twelfth's top leadership had little or no more combat and administrative experience than their commander.

North Africa, in the winter of 1942--43, proved an unforgiving locale for the conduct of air operations. The division of the Twelfth into two parts, each directly subordinated to its invasion task force commander (Maj Gen George S. Patton, Casablanca, and Maj Gen Fredendall, Oran), put the two sections of the air force 365 miles apart by air. The route travelled by the ground echelons from Casablanca and Oran to the front would, naturally, be more arduous and less direct. Not only the distance between the two halves, but the task force commanders' reluctance to give up command of their air assets, prevented the Twelfth from gathering its full force. Part of the Twelfth remained tied to the U.S. Fifth Army in Morocco to watch the Spanish. While portions of the AAF would eventually travel the entire 1,065 miles from Casablanca to Tunis, the *Lüftwaffe* and the *Reggia Aeronautica* (Italian Royal Air Force) had major depots in Sicily, 160 miles from Tunis, and Naples, 375 miles from Tunis. The Axis Powers also seized the only four all-weather, hard-surfaced airfields in the Tunisian plain, which gave them a considerable advantage over the Allies, who operated from unimproved dirt fields in

[66] Msg, Marshall to Eisenhower, 14 September 1942, Verifax 240.7, item 2535, Papers of George C. Marshall, The George C. Marshall Foundation, Lexington, Virginia. This is Marshall's hand written draft, the official cable can be located in the National Archives as # 744, CM-OUT 4695 14 September 1942, OPD TS Message File.

[67] Msg, Marshall to Eisenhower, 26 September 1942, Marshall Papers, Marshall Library, Box 66, folder 43. This message bears Marshall's hand written and initialled note, "not used Gen Clarke will take by hand. GCM."

the Eastern Algerian highlands.[68] When the rainy season commenced in December 1942, these fields immediately turned into plane--wrecking mud puddles. The Allies had only one hard-surfaced field east of Algiers, at Bone, 115 miles from the front. To add to the confusion in the initial phases of the campaign, RAF and AAF units operated from the same airfields. All supplies for the forward units of the Twelfth, when they finished their trek to the front, would have to move along the feeble colonial road network and one over-worked, single-track rail line from Algiers.

In addition, the Twelfth lacked mobility. Aircraft might travel far and swiftly, but they remained tethered to their ground echelons. The ground echelons required considerable motor or rail transport to keep pace with the rapidly changing front lines characteristic of modern warfare. Already hampered by the frangible French railways, the AAF in North Africa had to prevail over a chronic shortage of motor transport. The Twelfth started the Tunisian Campaign under strength in trucks because the invasion planners, facing the usual premium on shipping space confronting any large scale amphibious invasion and envisioning a static role for the AAF, had pared the Twelfth's motorized components to a minimum. The Oran Task Force carried no 2 1/2 ton trucks, and only 50% of all types of organizational vehicles. The Casablanca Task Force sailed with 100% of its men but only 50% of its materiel.[69] Maj Gen Fredendall's U.S. II Corps aggravated the transportation shortage by stripping away much of the Twelfth's shrunken allocation of motor transport to support their own rush to the east.

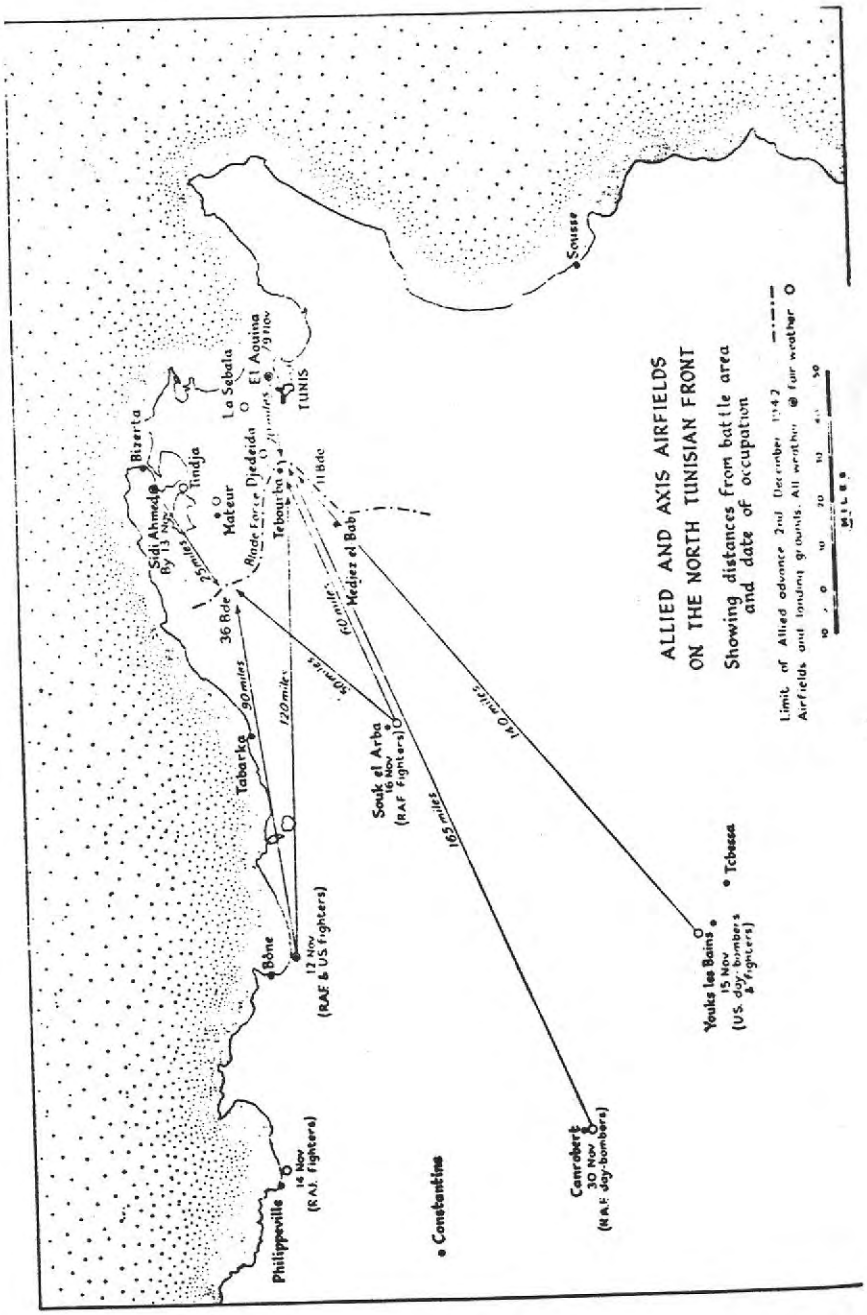
The Eastern Air Command suffered the same hardships. In the invasion planning it had requested shipping for enough motor transport to make its ground echelons 100% mobile. The planners allocated the EAC only fifty percent of its request.[70] Many of the vehicles that did arrive immediately fell into different hands. One air observer reported that new units', "Senior Officers and others were in the habit of commandeering vehicles as soon as they were unloaded in ALGIERS, without regard to whether they were consigned to their unit

[68]One, El Aouina, was only 20 miles from the front-lines, and another, Sidi Ahmed, was 25 miles away.

[69] Richard M. Leighton and Robert W. Coakley, *Global Logistics and Strategy 1940-1943, United States Army in World War II*, subseries: *The War Department* (Washington, D.C.: OCMH, GPO. 1954), pp 437-438.

[70] Air Marshal William Welsh, "Report on Operation 'TORCH'," n.d. (early 1943), para. 30, p 9. PRO AIR 2/8805. This report covers Welsh's entire term as commander of the EAC and should be used with care as it omits many RAF errors while being critical of the Americans and the British Army.

Map 2:
Allied and Axis Airfields on the Northern Tunisian Front



SOURCE: Playfair, *The Destruction of Axis Forces in Africa*, p 178.

or not. When no longer needed these vehicles were abandoned by the wayside."[71]

The original strategic plans placing the Twelfth Air Force in a static role, far to the west of the combat area, added to the organizational chaos of the U.S. air units. Doolittle had difficulty in regaining command of his widely separated forces from the task force commanders. The task force commanders (ground force generals who were the equivalent of corps commanders) for the Casablanca and Oran invasions had each received control of approximately one half of the Twelfth Air Force to provide support for their invasion assault. After the assault the task force commanders only reluctantly released their attached air forces. The confusion compounded when new air and ground elements landed in Algiers in order to immediately enter the fighting in Tunisia, while their rear echelons landed half a continent away in Casablanca. The Twelfth had other units still in England, in America, or on convoys in the middle of the Atlantic.

Communications and intelligence problems also plagued the Twelfth at the start of the campaign. The French telephone system, at best primitive and inefficient, soon failed under the demands placed upon it. Atmospheric conditions unique to North Africa hindered radio transmission, as did lack of modern communications equipment and half-trained signals personnel.[72] In many instances motorcycle couriers had to carry the load--hardly conducive to efficient air operations.[73] As for military intelligence, the Twelfth had none. All of its operational information came from the British. This meant delays in planning and consequent delays in missions.

Pre-North African American Air Support Doctrine

The American ground and air forces started the campaign with an untested air support doctrine. Because of the AAF's position as a combat arm subordinate to the Army rather than as a service independent from the Army like the RAF, the ground forces, rather than air, had the decisive voice in determination of official doctrine. In 1926 this dominance was reflected in War Department Training Regulation 440-15 (TR 440-15), which stated categorically, "the mission of the Air Service is to assist the ground forces to gain strategi-

[71] Rpt "Operation 'Torch' - Lessons Learnt, Report of Investigation Carried Out in North Africa by Wing Commander Broad," 19 February 1943, PRO AIR 20/4521.

[72] Arthur Tedder, *With Prejudice, the War Memoirs of Marshal of the Royal Air Force Lord Tedder* (Boston: Little, Brown and Co., 1966), p 381.

[73] Craven and Cate, *Torch to Pointblank*, p 127.

cal and tactical successes by destroying enemy aviation, attacking enemy ground forces and other enemy objectives on land or sea, and in conjunction with other agencies to protect ground forces from hostile aerial observation and attack." TR 440-15 reinforced that injunction with another, the "Air Service is an essential arm in all major operations. The organization and training of all air units is based on the fundamental doctrine that their mission is to aid the ground forces to gain decisive success."[74] TR 440-15 authorized strategic bombardment operations under favorable conditions and after the defeat or neutralization of the hostile air force if it was "based on the broad plan of operations of the military forces."[75]

The advent of General Headquarters Air Force (GHQ,AF)in 1935 led to the revision of TR 440-15. This revision placed GHQ, AF under the commander-in-chief in the field in wartime, and under the Chief of Staff of the Army in peacetime. The revision gave the GHQ, AF three functions: 1. Operations beyond the sphere of influence of the ground forces; 2. Operations in support of the ground forces; 3. Coastal frontier defense. Operations beyond the ground forces sphere of influence were still required to conform to the Army strategical plan, prepared by a section of the War Department General Staff dominated by ground officers. In addition the GHQ Air Force Commander could be directed by the commander-in-chief in the field to "support designated operations of an army with all or with a specified part of GHQ Air Force in accordance with the instructions of such army commanders."[76] Yet the 1935 version of TR 440-15 represented a significant step forward in the eyes of air officers, in that it recognized a role for strategic bombardment equal to that of ground support.

One should remember that strategic bombing offered the airmen an institutional advantage not offered by tactical operations. Strategic operations were independent of the Army and could be used as a basis to justify an independent air arm. Tactical operations, on the other hand, would always be in cooperation with ground forces and difficult to separate from them. Hence the airmen's constant attempts to advance strategic air and lack of interest in tactical aviation.

Adolph Hitler's aggressive, *revanchist* foreign policy of 1936-39 and the outbreak of war in Europe led to re-examination of Army air doctrine. On April 15, 1940 War Department Field Manual 1-5 (FM

[74] WDTR 440-15, Fundamental Principles for the Employment of the Air Service, 26 January 1926, Section I, paras. 3 and 4a.

[75] *Ibid*, Section IV, para. 16g.

[76] WDTR 440-15, Employment of the Air Forces of the Army, 15 October 1935, Section III, para. 6f.

1-5), superseded TR 440-15 of October 15, 1935. The authors of FM 1-5 intended it to be the comprehensive rubric for the employment of all types of American military aviation. As such it defined the basic doctrines for strategic bombardment, anti-aircraft defense, support of ground and naval forces, and air operations in lieu of naval forces. This manual was based on the recommendations of a War Department Air Board, appointed by Secretary of War Harry H. Woodring on March 23, 1939. Woodring designated Arnold the board's president and its membership included Maj Gen Frank Andrews (recently appointed by Marshall to head G-3, Operations, of the General Staff) and Brig Gen George V. Strong (the head of the War Plans Division.) After polling the components of the Army and the Air Corps, including GHQ Air Force and the Air Corps Tactical School, the Board submitted its findings to the Chief of Staff on September 1, 1939. With only minor changes these findings became FM 1-5.[77]

Although this manual stressed the role of air power in the defense of the U.S. and its possessions, it provided for a strategic air offensive to "decisively defeat important elements of the enemy armed forces" and/or to "deprive the enemy of essential war material."[78] In its discussion of air operations in support of ground forces it laid down the following instructions, "the hostile rear area is the normal zone of action of support aviation since operations in this area permit the full utilization of striking power against concentrated targets with the minimum of losses and the maximum results. Support aviation is not employed against objectives which can be effectively engaged by available ground weapons within the time required." FM 1-5 also observed, "aviation is poorly suited for direct attacks against small detachments or troops which are well entrenched or disposed." The manual addressed the control of tactical air as well, stating that in general centralized control at the theater level maximized effectiveness, but noting, "when decentralization becomes necessary in situations requiring immediate tactical support of specified units, the superior commander may attach to or place in support of specified large units a part or all of his support aviation. Support aviation may thus act with greater promptness and better understanding in meeting the requirements of the supported unit." The manual added, "when combat aviation is employed for the immediate tactical support of surface forces the requirements of the supported force will be of

[77] Robert Frank Futrell, *Ideas, Concepts, Doctrine: A History of Basic Thinking in the United States Air Force 1907-1964* (Maxwell AFB, Alabama: The Air University, 1971), pp 49-51.

[78] WDFM 1-5, Employment of Aviation of the Army, 15 April 1940, Section II, para 18b.

paramount importance in the selection of objectives for air operations."[79]

In theory the manual should have supplied a reasonable compromise solution to the ground forces' desire for control of support aviation in a battle situation and the desire of elements of the Air Corps to centralize the control of all tactical air under the command of an airman. In practice all would depend on the attitude of the theater commander, who would almost certainly be a ground officer. In that case Air Corps officers feared that he would routinely attach air support units directly to his field armies or corps and ignore the strictures on centralization of air command. Army and corps commanders, whose attention would be focused solely on the attainment of their own immediate objectives, would be slow to release the attached air units and would invariably be unable to effectively cooperate with each other in a timely enough manner to take advantage of air's ability to concentrate all its forces over a single objective. FM 1-5, however, reflected the increase of influence of the Army Air Corps within the structure of the Army and that technology had now developed an aircraft capable of strategic bombardment, the B-17. No longer, as in 1926, could the ground forces impose doctrine by *fiat*.

The series of great pre-war Army maneuvers in Louisiana and North Carolina in 1941 showed the extent of the rift between the ground forces and the air forces. As the Army ground forces sought to adapt the German method of *Blitzkrieg* warfare to the American way of war, they clashed with the Army Air Forces, which had a different set of priorities. The ground forces looked at the war in Europe and saw the successes of the German Army acting in close concert with the *Lüftwaffe*, a force designed for ground support. The U.S. Army formed armored divisions and an armored corps to fight the new war. To work effectively these new formations required large-scale close air support to form a combined arms team capable of fighting the Germans on equal terms. Thus they needed modern planes to train with and an air support team and an air support communications network to function at full capacity. The Army Air Forces had difficulty in supplying those items.

When the AAF looked at the European War it saw needs for an air defense network and a strategic bombing campaign to weaken the Germans before attempting an invasion of the continent, if that proved necessary. The needs of the ground forces took a lesser priority. With the Western Allies buying hundreds of modern warplanes and its own training programs consuming most of the remaining aircraft production, the AAF had few aircraft to devote to air

[79] *Ibid.*, Section IV, para. 26a & b.

support training. Given these conflicts the pre-war maneuvers proved unsatisfactory.

Ten days before the attack on Pearl Harbor Arnold took note of the lack of coordination between the ground and air during the maneuvers. He and Marshall agreed the fault lay in the "lack of knowledge of fundamentals on the part of both the Air and Ground elements."[80] Air and ground officers did not know air communications techniques and procedures, proper employment of their own forces for air operations, and the characteristics and limitations of air itself. Arnold informed Spaatz that Marshall wished to hold a series of command post exercises at Fort Benning, Georgia, for all the major combat commanders of the Army. "The first one should be started off," recommended Arnold, "with a general discussion by all present as to exactly what Air Support means and how it is to be carried out, so that the fundamentals may be discussed frankly and all present get some ideas of what can and should be expected."[81]

The onset of the war increased the intensity level of the dispute between air and ground, while the Army reorganization of March 9, 1942 institutionalized it by making the disputants equal in power and prestige. In that reorganization the Army Air Forces and the Army Ground Forces (AGF) became separate and equal organizations under the Army General Staff and War Department. If, as in 1926, one arm or the other could have imposed its will, then at least one of them would have been content. Or if a virtually unlimited number of planes had been available then both sides could have had adequate air resources for both strategic bombing and ground support, as was the case in 1944-45.

On April 9, 1942 the War Department promulgated a manual on air support based on the lessons of the pre-war exercises, War Department Field Manual 31-35 (FM 31-35), "Aviation in Support of Ground Forces." This manual has become the object of much vituperation from air historians, who blame it for many of the early war AAF ground support woes. The AAF official history said of FM 31-35, "the outstanding characteristic of the manual lay in its subordination of the air force to ground force needs and to the purely local situation."[82] Yet the AAF itself had issued the manual. The Army Air Support Staff Section drew up the draft manual, and its successor in the March 1942 reorganization, the Directorate of Ground Support, produced the finished copy.

[80] Memo, Arnold to Spaatz, Subject: "Lack of Coordination between Ground and Air in the Carolinas and Louisiana Maneuvers," 28 November 1941, Arnold Papers, Box 44, folder title "Maneuvers."

[81] *Ibid.*

[82] Craven and Cate, *Torch to Pointblank*, p 137.

In fact the manual attempted to reconcile the irreconcilable air and ground positions. It was not intended to speak to any aspect of air power other than air support. The manual devoted more than half its length to a detailed exposition of the air-ground communications network rather than doctrines of employment. It placed an air support command, along with fighter, bomber, and base commands within a theater air force, all under the control of an airman. This was balanced by noting that the air support command was habitually attached to or supported a field army. Within the air support command all control was centralized in the hands of its commander, an airman, who would assign missions as the needs of the ground units developed. However, if the situation required it, an aviation unit could be "specifically allocated" to the support of subordinate ground units.[83]

If that occurred the aviation unit would receive its orders from an air support control unit commanded by an airman and co-located at the command post of the supported unit. The overall air support commander retained the right to give other air support missions to the specifically allocated unit. The manual went on to state, "designation of an aviation unit for support of a subordinate ground unit does not imply subordination of that aviation unit to the supported ground unit, nor does it remove the combat aviation unit from the control of the air support commander. It does permit, however, direct cooperation and association between the supporting aviation unit and the supported ground unit and enables combat aviation to act with greater promptness in meeting the requirements of a rapidly changing situation." FM 31-35 further stated, "aviation units may be *attached* (emphasis in original) to subordinate ground units. This is exceptional and should be resorted to only when circumstances are such that the air support commander cannot effectively control the combat aviation assigned to the air support command."[84] The manual assumed that in most instances air control would be centralized at the theater level.

FM 31-35 began its consideration of the method of employing air support aviation with the following obvious, but often ignored, homily: "the basis of effective air support of ground forces is teamwork. The air and ground units in such operations form a team. Each member of the team must have the technical skill and training to enable it to perform its part in the operation and a willingness to cooperate thoroughly."[85] The first factor affecting employment was the establish-

[83] FM 31-35, "Aviation in Support of Ground Forces," April 9, 1942, Chapter 2, Section I, para. 6.

[84] *Ibid.*

[85] *Ibid*, Chapter 2, Section I, para. 10.

ment of local air superiority to ensure air support without excessive losses. Next came economy of force, defined as hitting the right target at the right time rather than using a few aircraft to hit widely scattered targets. Other factors included attention to time and space factors (distance from air bases, speed of communications, readiness status of aircraft, etc.),the inherent flexibility of air power to concentrate on short notice, and the necessity of the air support command to cooperate with other air elements in the same area.

The manual's procedures for selecting targets raised the ire of pro-air power critics, who fastened on one paragraph, "the most important target at a particular time will usually be that target which constitutes the most serious threat to the operations of the supported ground force. The final decision as to priority of targets rests with the commander of the supported unit."[86] This lifting of one paragraph from its context distorted the balanced intent of the entire manual, which was not an encomium for the doctrinal positions held by the ground forces. Ground force officers objected to the centralized control of air support aviation inherent in the air support command; they favored the direct attachment of air units to the units they supported.[87] FM 31-35 satisfied neither the ground nor the air forces, which was perhaps the true measure of its attempt at objectivity. If it proved wanting on the battlefield it was because most of the American air and ground commanders in North Africa were inexperienced in combat, half-trained in the air support procedures laid down by FM 31-35, and/or ignorant of its provisions.

The issuance of FM 31-35 did little to solve the U.S. Army's and AAF's ground support training deficiencies. In front of War Department, Navy, and British Army observers the AAF botched its share of a corps level demonstration at Fort Benning, Georgia, on June 13, 1942.[88] This demonstration, conducted under the command of Maj Gen Lloyd R. Fredendall, included units of the 1st Infantry Division. Both the division and Fredendall would play large roles in North Africa. In July 1942 the commander of the U.S. Armored Force, the chief armored training unit of the Army, complained to Chief of Staff Marshall that the armored forces did not have a single combat plane working with it. When informed of the complaint Arnold tartly replied that the armored forces had the best the AAF could supply and he

[86] *Ibid*, Chapter 2, Section III, para. 31. See Craven and Cate, *Torch to Pointblank*, p 137.

[87] Futrell, *Ideas, Concepts, Doctrine*, p 66.

[88] Kent Roberts Greenfield, "Army Ground Forces and the Air-Ground Battle Team Including Organic Light Aviation" (Study No. 35), Historical Section Army Ground Forces, 1948, pp 11-12.

hoped to have sufficient quantities of light bombers and observation planes to meet ground force requests in full by the end of the year.[89]

In September the Commanding General of the Armored Force, Maj Gen Jacob L. Devers, complained directly to Arnold, "of lots of talk but no real action because there is a great shortage of equipment." Devers pointed out specific shortcomings in bombardment, observation, and communications units attached for training. "I stick to my opinion," stated Devers bluntly, "that there is no air-ground support training. We are simply puttering. Cannot something be done about it?" Arnold replied that he had no modern heavy bombardment, medium bombardment, or fighter units available because all such units and their replacements were committed to active battle fronts. He had already allocated his only uncommitted light bombardment group to one of the Armored Forces' major training establishments, the Desert Training Center. He attempted to reassure Devers by observing: "When our ground forces are committed to an active combat theater, I believe that they may look upon practically the entire Air Force in that theater as support aviation, as it is in North Africa today."[90] In conclusion Arnold stated he would continue to push for modern aircraft for training as soon as they became available.[91]

If the state of air-ground training of the Armored Forces, which had the highest priority, needed bolstering as late as September 1942 one can only imagine the status of the Army's remaining divisions--and of the forces assigned to the North African invasion. Lt Gen Leslie J. McNair, Commander of the Army Ground Forces, admitted on December 30, 1942, "So far as I know, there is no U.S. ground unit overseas which had air-ground training before leaving the U.S., other than the superficial occasions incident to large maneuvers."[92] Clearly the invasion ground and air forces were woefully untrained for the task ahead of them.

Despite the benefit of Britain's more than three years at war, the 1st British Army, Eisenhower's chief British ground formation, entered battle with air support doctrine and practice hardly superior to

[89] Memo, Marshall to Arnold, 10 July 1942, and Memo, Arnold to Marshall, Subject: Air-Ground Support of Armored Forces, 20 July 1942, Arnold Papers, Box 42, Folder "Support of Armored Forces.

[90] Arnold's mention of North Africa referred to Egypt where the British Western Desert Air Force (assisted by a handful of AAF units) was supporting Lt Gen Bernard L. Montgomery's British 8th Army against German Field Marshal Irwin Rommel's German-Italian Panzer Army.

[91] *Ibid*, Ltrs, Devers to Arnold, 5 September 1942, and Arnold to Devers, 23 September 1942.

[92] Ltr, McNair to Arnold, 30 December 1942, Arnold Papers, Folder: Air-Ground Support, Box 42.

Eisenhower's American troops. The British air planners for the invasion took no notice of the combat proven air support advances made by their own forces in the Middle East.[93] The British 8th Army and the Western Desert Air Force (WDAF), thanks to the hard lessons learned at the hands of the German *Afrika Korps*, had developed both an effective air support team and a modified air support doctrine based on close air-ground planning and communications. The British North African contingent for TORCH ignored that example and instead produced a plan similar to that of the advanced air striking force, which accompanied the British Expeditionary Force to France in 1939.[94] That plan proved deficient, because it did not provide close enough cooperation between the RAF and the British Army. The TORCH invasion plan in general suffered from the same defect.

Nor were the British troops appreciably better trained in air-ground operations than the Americans. The 1st Army, under Lt Gen Sir Kenneth A.N. Anderson, was a hastily assembled force that had never operated together as a whole. Nor were its troops of the highest quality--the British had skimmed their home country units of their best manpower and starved them for modern equipment in order to maintain the 8th Army in the desert war against Rommel. In particular the home forces had been forced to divest themselves of almost all their organic light anti-aircraft artillery to augment that of the desert forces. This deficiency was not made good before the British units embarked for the invasion.[95] The shortage of anti-aircraft weapons left the 1st Army vulnerable to even light air attacks, unless it received adequate protection from friendly fighter forces.

The Eastern Air Command, the RAF force responsible for the 1st Army's air support, had also been created for the TORCH invasion. It had not worked or trained with the 1st Army. Its staff had come together at the last moment, with no opportunity to form a team. Its squadrons had worked together, but its administrative and service troops were a hastily amalgamated hodge-podge of men with no training for field service or field conditions. They suffered severely in the sparse North African countryside where virtually no supplies

[93] Speech, "Talk by Air Vice Marshal Sir A. Coningham, to Assembled British and American General and Senior Officers at the End of the Second Day of the Army Exercise," 16 February 1943, para 6-7.

[94] RAF Narrative, "North Africa," p 202.

[95] I.S.O. Playfair and C.J.C.Molony, *The Mediterranean and the Middle East*, Vol. IV, *The Destruction of the Axis Forces in Africa* (London: HMSO, 1966), p 182. Also see Lt Gen Anderson's despatch, "Operations in North West Africa from 8th November 1942 to 13th May 1943," Supplement to the *London Gazette*, 5 November 1946, p 5454. Anderson completed the despatch on 7 June 1943, but the War Office did not publish until after the war. A note to the despatch added by the War Office admits the scarcity of light anti-aircraft weapons.

could be obtained locally. The EAC had responsibilities beyond its means. It not only had to give air support to the 1st Army, but it had to provide for the air defense of all ports east of and including Algiers, escort and protect reinforcement convoys and shipping, and support the operations of the Allied fleet. Until it gained experience the EAC's own manpower and organizational deficiencies, not to mention the unfavorable airfield situation and the totally inadequate supply lines, would hinder its performance.[96]

In the long run the shortcomings enumerated above merely slowed the eventual victory of the Allies. The Axis Powers could only delay the inevitable, given the decisive Anglo-American advantages in men and material--advantages, in turn, augmented by the priceless information supplied by the British signal intelligence organization which decoded German Air Force, Navy, and, Army as well as Italian Air Force and Navy ciphers at both the strategic and tactical level. The British breaking of Axis codes, known as ULTRA, contributed, perhaps, more decisive information in this campaign than in any other in the European Theater.

Operations November-December 1942

Originally the Allies had planned to capture airfields at Bone, Bizerta, and Tunis with airborne and commando troops, but the uncertain reaction of the French forces in Tunisia led to the cancellation of those ambitious plans. On November 10 a fast convoy left Algiers to occupy the port of Bougie, a little under a hundred miles away, but still beyond the practical escort range of the EAC's Spitfires flying from Algiers. This convoy and a slow reinforcement convoy initially had air cover from the British carrier *Argus*. In the meantime high surf foiled an attempt to land aviation fuel at the airfield at Djidjelli, on the coast a few miles east of Bougie, grounding a squadron of just arrived Spitfires. An attempt to supply petrol by truck from Bougie, a distance of 60 miles by road, misfired when the British 36th Infantry Brigade commandeered the designated trucks for reconnaissance purposes.[97] This meant that when the *Argus* withdrew , according to schedule, in the afternoon, the unloading ships at Bougie had no air protection. The *Lüftwaffe* promptly took advantage of this to sink three transports.

[96] RAF Narrative, "North Africa," pp 202-204.

[97] Welsh, "Operation Torch," para. 61-62, pp 21-22. Also see, Ltr, JR/145 Air Marshal Sir James Robb, to Air Commodore T.N. McEvoy, Air Ministry, 22 July 1946, Robb Papers, RAF Museum Hendon, England.

On November 12 a small landing force seized the port of Bone, 125 miles east of Bougie and 185 miles by road from Bizerta. Bone had the eastern most, hard-surfaced, "all-weather," airfield available to the Allies for the bulk of the campaign. It served as the forward air base for the RAF Eastern Air Command. It also had unloading facilities for 22 ships--an important consideration when the relative ease of sea transport was compared to the difficulties encountered on the only two roads eastward from Algiers and the single-track railroad. It took trains four to six days to reach the advanced rail-head at Souk El Arba (taken on November 16 by British paratroopers) from Algiers, and the line could sustain only six military trains a day with a daily capacity of only 2,000 tons.[98] The rail line underwent a change in gauge just east of Constantine, which added the delay of transhipment and the threat of another bottleneck in the line of supply.[99]

Lt Gen Anderson, despite the grandiose title of his command, had only the under-strength British 78th Division to send overland from Algiers. Its main body started its advance from Algiers on November 14. Its spearheads reached Djebel Abiod, about 25 miles from Bizerta, on November 17. At that point the British ran into tough German paratroops advancing from Bizerta and halted to organize for a general attack. Twelfth Air Force units began to arrive at British forward fields by the third week of November. They placed themselves at Welsh's disposal but not under his command. He could not order U.S. squadrons to specific objectives, and "the targets were decided on a day in advance after exhaustive discussion."[100] A week later, reinforced by units from the U.S. 1st Armored Division, the British resumed their advance. Overcoming counter-attacks supported by tanks and dive-bombers, the Allies advanced to the outskirts of Djedeida, 12 miles from Tunis, on the 28th. Concentrated German dive-bombing attacks and newly arrived anti-tank guns halted them there. The next day the heaviest air attacks to date hit exposed Allied tanks and infantry, while the Germans organized their defense. By the 27th the 1st Army had a squadron of Twelfth Air

[98] George F. Howe, *United States Army in World War II*, subseries: *The Mediterranean Theater of Operations, Northwest Africa: Seizing the Initiative in the West* (Washington, D.C.: OCMH, GPO, 1957), pp 278-279, 292. Also see Anderson, *Despatch*, p 5452.

[99] Ltr, AC/1623/Org., Air Commodore in Charge of Administration, EAC, to Col Zane, 12th Air Force, Subj: Maintenance of Air Forces in the Forward Area, 8 December 1942. PRO AIR 23/6561.

[100] Welsh, Report on Operation "Torch," n.d. {c.a. May 1943}, p 27, PRO AIR 2/8805. Tedder, *With Prejudice*, p 370 says that Eisenhower assured him that the forward AAF units were under Welsh's "operational control" this seems to overstate the strength of Welsh's position.

Force P-38s (25 planes) at Youks-les-Bains, 2 squadrons of RAF Spitfires (36 planes) at Souk el Arba, and 2 squadrons of RAf Spitfires and 1 of Hurricane fighter-bombers (54 planes) at Bone available for both air superiority and close air support operations. These planes had a serviceability rate of only 50% and Spitfires had no bombing capability. The aircraft at Bone provided air defense for the port and arriving convoys and were not always available. In fact the British did not use fighter bombing to support their front line troops in the campaign until December 15.[101]

The *Lüftwaffe* countered those planes with a force of approximately 81 fighters and 28 dive-bombers, based in Tunisia. In the entire Mediterranean the Germans possessed 1,220 aircraft of which more then 512, assigned to *Fliegerkorps II*, were operating against TORCH by November 12 and over 850 by December 12. At the same time they raised their number of transport aircraft from 205 to 673.[102]

Anderson naturally found the air situation unsatisfactory. He called off his attack on the 29th partly because "the strain of persistent dive-bombing was beginning to tell." He complained further that air attacks on Bone had seriously disrupted his supply lines and stated, "This week was notable for the heavy scale of enemy air attack, particularly by dive-bombers, to which the leading troops were subjected, and which our own air forces were at this stage unable to prevent."[103] Here, the inexperience of Anderson's troops, their light scale of anti-aircraft armament, and their lack of ammunition told. The dive-bomber was a terrifying weapon especially against untried troops, who lacked the firepower to keep the slow flying dive bombers at a respectful altitude.

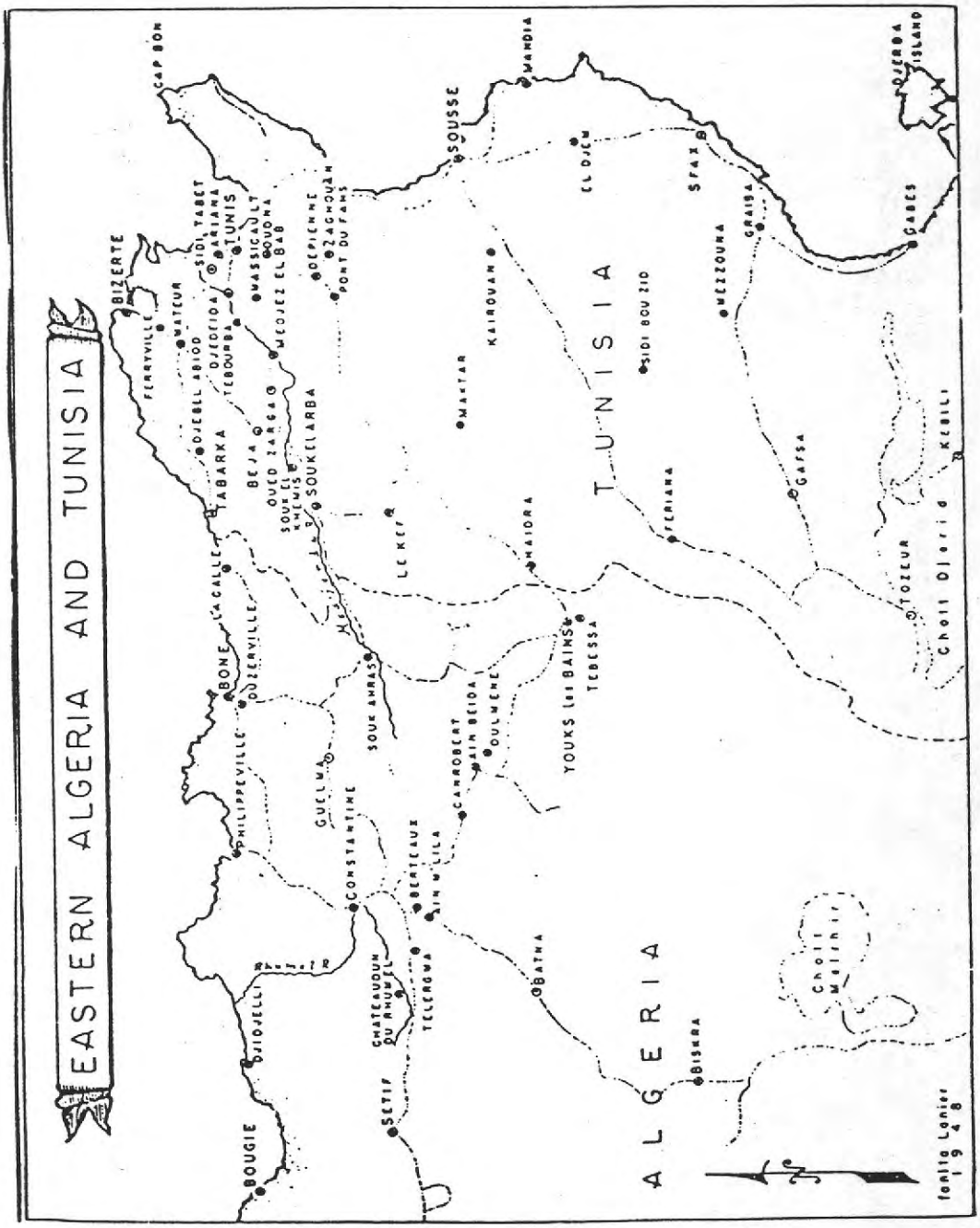
In the first phase of the campaign the Allied air forces did not provide adequate close air support because the Allies could not obtain air superiority and because no air-ground team existed. The EAC's commander, AM Welsh, had appointed Air Commodore A. M. Lawson to operate the forward squadrons. Upon arrival at 1st Army Headquarters and later at 78th Division Headquarters Lawson found communications chaotic. "Quite candidly," he acknowledged, "I am astonished at every point I have visited of the lack of knowledge of the operational setup and of the urgency of the drive in getting

[101] Howe, *Northwest Africa*, p 294 and Playfair, *The Destruction of the Axis Forces in Africa*, p 183.

[102] Playfair, *The Destruction of the Axis Forces in Africa*, p 171 and Hinsley, *British Intelligence*, II, pp 487-488.

[103] Anderson, "Despatch," p 5454. At this point in the despatch the War Office weakened Anderson's excuses by noting, "By the standards of later campaigns this enemy air activity was not on a serious scale. Its moral effect at the time, however, was increased by the inexperience of the troops and by the scarcity of light A.A. weapons."

Map 3:
Eastern Algeria and Tunisia



SOURCE: Craven and Cate, *Torch to Pointblank*, p 80.

proper communications established."[104] Without communications air-ground coordination ceased to exist. Anderson complicated matters further by insisting on repeated attacks on Tunis, Bizerta, and Axis airfields, as well as defensive patrols, known as "air umbrellas," over his own troops. These demands stretched the EAC far beyond its limited ability. AM Welsh did not help the situation by establishing his headquarters six miles outside of Algiers where he isolated himself from not only Anderson and Doolittle but from Eisenhower and Allied Force Headquarters as well.[105]

On November 13, the day before Anderson began his advance toward Tunisia, Eisenhower telegraphed Spaatz. "I continue to look to you not only for control of the United States air in the United Kingdom but as *my most trusted air advisor* (author's italics). ... It may be best for us to confer immediately in light of what has so far transpired."[106] Eisenhower referred to the Axis Power's prompt and vigorous decision to establish a bridgehead in Tunisia. This surprised the Allies whose invasion planners had discounted the possibility of such an action. The Allied command anticipated a cakewalk into Tunis once they had overcome the Vichy French.[107] Four days later, on Tuesday, November 17, Spaatz's B-17 touched down on Gibraltar, the site of Eisenhower's headquarters for the initial phase of the campaign. Doolittle met Spaatz, who had come to the Rock at Eisenhower's request.

By the time of their meeting, Eisenhower had already received from the ULTRA organization intercepts which revealed an unexpectedly heavy Axis response. ULTRA had cracked the particular Enigma code machine rotor setting (Locust) employed by the German Supreme Commander in the Mediterranean, *Lüftwaffe* Field Marshal Albert Kesselring, and could read it "without delay".[108] As the daily intercepts arrived confirming increased totals of Axis men, aircraft, and tanks, Eisenhower redoubled his pressure on his subordinates to secure Tunisia.

Thus Spaatz, who had arrived expecting to discuss the Single Theater Air Force plan, instead found himself enmeshed in Eisenhower's anxious attempts to hurry the Twelfth to the East and to

[104] RAF Narrative, "North Africa," p 76.

[105] Ltr, JR/145, Air Marshal Robb to Air Commodore McEvoy, 22 July 1946, Robb Papers.

[106] Telephone Message, Eisenhower to Spaatz, 13 November 1942, Spaatz Papers, Diary.

[107] F. H. Hinsley, *British Intelligence in the Second World War its Influence on Strategy and Operations*, Vol. II, (New York: Cambridge University Press, 1983), pp 465-466 and 487-489.

[108] *Ibid.*, II, pp 489-490

interdict the flow of Axis reinforcements. The confused state of Doolittle's command took priority over all other air concerns. At the meeting Spaatz and his commanding officer "decided to postpone the discussion of the organization of the Air Force until I (Spaatz) could complete a brief visit to the principal establishments in the North African Theater".[109]

As he emerged from the Gibraltar meeting he learned that his Chief of Staff, Brig Gen Asa N. Duncan had ditched in his B-17 in the Atlantic with slim hope of survivors. Subsequent air search unearthed no trace of the plane, its crew or passengers. The AAF had lost a valuable, experienced officer and Spaatz had lost a friend.

The tour, itself, was hardly a case of *veni, vidi, vici* for Spaatz. On his tour Spaatz found much to correct while obtaining few concrete results. In company with Doolittle, he left the Rock for Africa, on the morning of November 18. At Oran Spaatz noted its excellent repair facilities and "great numbers of (AAF) men who knew what they were doing and who were going about it in a fast and orderly fashion." He gathered a somewhat different impression at Algiers, particularly of its major air facility, Maison Blanche. He found it overcrowded and disorganized, as well as unsuitable for deployment of B-17s. Its location put the heavy bombers too close to the front, leaving them overly exposed to enemy counter-strikes. In typical fashion Spaatz observed "the place lacked organization." After a quick stop at Gibraltar to inform his superior of his findings, Spaatz flew to Casablanca on Friday, November 20. There he conferred with Brig Gen John K. Cannon, Commander of the Twelfth Air Support Command (XII ASC). "Uncle Joe" Cannon, while not a member of the innermost circle of AAF decision makers, occupied a rung only a step below the Arnold, Spaatz, Eaker, and Andrews echelon. Cannon took flight training in 1921-22, graduated from the Air Corps Tactical School and the Command and General Staff School in the 1930s, and led the First Air Force's Interceptor Command in 1941. His specialties, pursuit aviation and training, neatly complemented the responsibilities he faced in North Africa. Spaatz reported to Arnold "my impressions at Casablanca were very favorable." The Commanding General AAF, ETO, went on to note the excellent shop facilities and the muddy field conditions at Casablanca's turf covered main aerodrome.[110]

Friday evening Spaatz returned to Gibraltar once again and spent the next day in conference with Eisenhower and his staff. These staff conversations resulted in an agreement on the Single Theater Air Force which Spaatz and Arnold had championed for

[109] Ltr, Spaatz to Arnold, 23 November, 1942, Spaatz Papers, Diary.
[110] *Ibid.*

months. Eisenhower informed both airmen that he "was going to put in a firm recommendation to that effect but would await, for the moment, the outcome of the Tunisian fight."[111] This caveat proved the undoing of the unified air plan. The fight in North Africa dragged on so long and sucked in so many resources that it required the creation of a new theater of operations. This institutionalized the split in AAF European resources. The most concrete result of the November 21 meetings was Spaatz's transfer from England to North Africa as Eisenhower's chief air advisor.

Spaatz returned to England on Sunday. He forthwith designated Eaker to command the Eighth Air Force, and shortly thereafter he informed Arnold "plans are underway for a Theater Air Force Headquarters and integration of the Eighth and Twelfth under its command. ...With a very small staff I rejoin Eisenhower... ."[112] Arnold approved these moves. Spaatz flew back to Gibraltar on December 1. The same day the Germans, strongly supported by tanks and air, attacked--driving back the advance elements of the 1st Army. By December 3 the Germans had defeated the 78th Division and substantial portions of the U.S. 1st Armored Division operating under British control. The air superiority they had established over the battlefield proved a decisive factor in their victory.

Also on December 3, Eisenhower appointed Spaatz Acting Deputy Commander-in-Chief for Air of the Allied forces in North Africa. Spaatz's appointment marked Eisenhower's first attempt to improve the effectiveness of the Allied air forces in his command. Spaatz would coordinate air operations rather than command them because his new position had only advisory functions. Eisenhower noted "This arrangement is to meet an emergency."[113] Spaatz wrote to Stratemeyer, the Chief of the AAF Staff, "this is a temporary solution to a situation which will eventually require further clarification."[114]

Temporary or not, Spaatz immediately made his presence felt. On December 2 he had met Doolittle, Brig Gen Howard A. Craig, and Vandenberg. They enumerated the difficulties facing them. The Twelfth's leaders especially objected to Eisenhower's directive to both the Twelfth and the EAC to give Lt Gen Anderson and his 1st Army "everything he asked for".[115] In effect Eisenhower gave control of air

[111] Chandler, *Eisenhower's Papers*, Vol. II, Ltr, Eisenhower to Arnold, 21 November, 1942, item 654, pp 750-752.

[112] Msg, Spaatz to Arnold, 24 November, 1942, Spaatz Papers, Diary.

[113] Msg, Eisenhower to Gen H. L. Ismay, 3 December, 1942, *Eisenhower's Papers*, II, item 684, pp 790-791.

[114] Ltr, Spaatz to Stratemeyer, 9 December, 1942, Spaatz Papers, Diary.

[115] Ltr, Spaatz to Stratemeyer, 9 December 1942, Spaatz Papers, Diary. Also see, Command Diary Entry, 2 December 1942.

operations completely over to Anderson. This in turn, as the assembled airmen all agreed, "resulted in misuse of air power".[116] Anderson's daily demands for maximum effort in the defense of his front line troops meant the dedication of all missions to air defense and ground support operations--an ineffective practice resulting in terrific wear and tear on crews, aircraft, and maintenance personnel. Anderson, in the airmen's opinion, also failed to allot them necessary road and rail transport for their forward fields. The restrictions of Eisenhower's directive chafed the U.S. airmen, because the directive placed them under the command of a ground force general whose ideas of air power seemed, at best, hazy. Spaatz agreed to broach these problems to Eisenhower as soon as possible.[117]

On Thursday, December 3, Spaatz established his Headquarters. Craig had responsibility for liaison between the Twelfth and Eisenhower's Headquarters, called Allied Force Headquarters (AFHQ), while Air Vice Marshal (AVM) James M. Robb would do likewise between the EAC and AFHQ. Spaatz also decided to assign deep bombing missions (in current USAF terminology "deep interdiction" missions) against enemy supply lines to the Twelfth and support of ground operations to the EAC. The light and medium bomber units of the Twelfth would be attached to the EAC when the congested supply situation in the forward fields eased.[118]

Spaatz's decision to divide his forces into one force devoted exclusively to bombing missions behind the enemy's lines and the other devoted solely to the support of ground operations departed from the then current AAF doctrine of a composite air force, a self--sustaining unit capable of all types of combat and support missions. Of course, the composition of the forces at hand made his decision almost mandatory. The EAC was equipped largely with fighter and other light aircraft, while the Twelfth had the only heavy bombers dedicated entirely to the theater. This functional division of December 1942 cleared the way for the AAF to concentrate its attention on its speciality of daylight precision bombing while giving to the RAF the responsibility of ground support for the mostly British 1st Army. It also helped to relieve the incredible congestion of aircraft in the forward airfields. Doolittle and the 12th Air Force had literally marched to the sound of the guns, flying groups into fields before their ground echelons arrived and crowding the EAC, which occupied the same fields. To remedy the situation the Allied airmen decided to

[116] *Ibid.*, and Craven and Cate, *Torch to Pointblank*, p 108.

[117] Command Diary Entry, 2 December 1942, Spaatz Papers, Diary.

[118] Command Diary Entry, 3 December, 1942, Spaatz Papers, Diary.

withdraw four squadrons of fighters (out of twelve) from the front to Constantine and to recommit them when the land offensive started.[119]

At Spaatz's insistence, the flow of ULTRA intelligence to the AAF in North Africa greatly increased. He arranged to have ULTRA and other intelligence reports delivered to him each day by eleven o'clock. Then he and his staff would discuss and analyze the information before Spaatz made his daily call to Eisenhower. Spaatz brought the Eighth Air Force Chief of Intelligence, Colonel George C. McDonald, from the United Kingdom in order to organize the U.S. intelligence set up. Spaatz had worked closely with McDonald, then Assistant U.S. Military Attache for Air, during the Battle of Britain and during their mutual stint with the Eighth. McDonald had twenty years experience in intelligence with a speciality in photographic reconnaissance, to which he had added several months experience in operations and a familiarity with ULTRA.[120]

In the afternoon of December 3, Eisenhower, Anderson, Spaatz, and Doolittle met to discuss current operations and future plans. The shortcomings of Allied air power, highlighted during the successful German counterattack of December 1, ranked high on the agenda. Eisenhower reported to the Combined Chiefs of Staff that "the scale of possible air support is not sufficient to keep down the hostile strafing and dive bombing that is largely responsible for breaking up all attempted advances by ground forces."[121] Anderson expressed his attitude in 1st Army's December 3 situation report: "unusually heavy dive bombing in the morning. The attempt will definitely be made tomorrow to operate fighters from Medjez el Bab aerodrome in the hope of alleviating the burden this continued dive bombing places on very tired troops whom I cannot relieve for at least three days. Until this air threat can be properly dealt with," Anderson noted, "there seemed no possibility of lessening the effort which I must demand from the R.A.F. and U.S. Squadrons now supporting me."[122] Spaatz and the other air commanders argued for a partial pause in the air effort in order to arrange for 1) the completion of advance airfields, 2) the arrival of additional air maintenance troops in the forward area, 3) the positioning of spare parts and supplies in the advanced air-

[119] Rpt, "Notes on Decisions Taken as Result of Policy Laid Down at Commander-In-Chief's Conference, 3rd December 1942," PRO AIR 23/6558.

[120] *Ibid.*, Meeting of (AFHQ) Air Staff, 8 December, 1942, Also see Winterbotham, *The Ultra Secret*, p 146. For McDonald's Transfer see Ltr, Spaatz to Eaker, 9 December, 1942, Spaatz Papers, Diary.

[121] Msg, Eisenhower to Combined Chiefs of Staff, 3 December, 1942, *Eisenhower's Papers*, II, item 685, pp 791-793.

[122] RAF Narrative, "North Africa," p 77, cites Command Post First Army Situation Report on December 3, dated 4 December 1942.

fields, and 4) the provision of radar warning and anti-aircraft defenses for the forward area.[123]

The present scale of operations could not continue, the airmen contended, if the ground forces wished to have any planes left to support them for the next attack. The EAC, for instance, reported, on December 2, almost 100% wastage for its Spitfire squadrons. Eisenhower agreed to wait for his air power to improve its logistics and to reduced air operations. The bombers, as Spaatz had promised his AAF colleagues, switched to the ports. The fighters would mount a counter-air campaign against German airfields. This pause would last until December 9, when the offensive would renew.

Unfortunately, this delay proved the first of many. The rainy season arrived with a vengeance, turning the North African terrain, roads and airfields in particular, into a viscous muddy slop which quickly sapped the Allies' desire to advance. For instance, as early as November 29, one of the Twelfth's main airfields, Tafaraoui, located a short distance from Oran, had a hard surfaced runway but no hard surfaced dispersal areas. It reported 285 planes mired in the mud,[124] giving rise to a local ditty about "Tafaraoui where the mud is deep and gooey."

In the three weeks from the December 3 meeting to Christmas Eve Spaatz drove himself and his staff to prepare for a renewal of the Allied offensive. He called the theater's four aviation engineer battalions from Oran and set them to work to the east of Algiers. Despite the loss of two battalions worth of equipment in ships that did not reach North Africa and confused unloading, the engineers performed well. By December 12 the 809th Av. Eng. Bn. had finished a single well drained airstrip at Telergma, the start of a medium bomber airfield complex. Spaatz sent the heavy bombers to Biskra, on the fringes of the Sahara desert. There an engineer company completed a field in four days.[125] To supply his forward fields Spaatz ordered every available air transport to carry bombs, ammunition, fuel, supplies of all sorts to the front.

As usual he travelled, visiting Maison Blanche on the 15th (where he noted little improvement from his November 18 inspection), to Anderson's headquarters on the 20th (where Anderson expressed concern that Welsh would not properly support Lawson), and to Biskra on the 21st to check bomb supplies. To increase the effective-

[123] *Ibid.*

[124] Alfred M. Beck, Abe Bortz, Charles W. Lynch, Lida Mayo and Ralph F. Weld, *United States Army in World War II*, subseries *The Technical Services, The Corps of Engineers: The War Against Germany*, (Washington: Center of Military History, GPO, 1985), p 86.

[125] Beck et al., *The Corps of Engineers War Against Germany*, p 87.

ness of planning he prodded his chief of intelligence to get photo reconnaissance in order, especially in front of the 1st Army so that both the army and air forces could determine bombing targets. Next he ordered daily early morning weather flights over the front line to give air planners some idea of what could be expected. He did his best to improve not only communications between his headquarters and forward airfields but to establish links that would enable a unified air command for the theater. All this attention to detail had little immediate effect. Spaatz did not command "general weather."[126]

On December 24, after three days of rain had rendered all forward airfields unserviceable,[127] Eisenhower postponed any major offensive for six weeks.

By the end of December Allied air had not gained air superiority or established effective air support arrangements. Air attempts to cut down the flow of supplies across the Mediterranean to the Axis bridgehead also encountered difficulties. Axis supply tonnage received in Tunisia jumped dramatically from November to December. Seaborne supply tonnage increased by 60% from 12,627 tons to 21,437; airborne supply tonnage grew six-fold, 581 tons to 3503. Part of this increase represented only a diversion of shipping from Libyan ports overrun by the British, whose supply tonnage dropped by 19,000 tons in December.[128] Thus the total amount of supplies received by the Axis forces in Africa actually decreased.

Despite this increase in tonnage to Tunisia, Allied interdiction in Tunisia improved too--from no supplies shipped to Tunisia lost in November to 23% lost in December.[129] Throughout the Mediterranean the Allies sank 17 ships of over 500 tons deadweight in November, 12 by air, and increased that total to 32, 14 by air, in December.[130] Apparently most of the shipping lost to air occurred on runs to the Libyan ports. The American heavy and medium bombers concentrated their attacks on the Tunisian ports, causing disruption, delays and some damage. The native dock workers in particular refused to unload under the constant bombing.[131] This led to the practice of having debarking troops spend a day at the docks unloading supplies before marching to the front--an irritating but not damaging loss of

[126] Command Diary Entries, 3 December through 23 December 1942, Spaatz Papers, Diary.

[127] RAF Narrative, "North Africa," p 82.

[128] Howe, *Northwest Africa*, Appendix B, table 9, p 682.

[129] Playfair, *The Destruction of the Axis Forces in Africa*, citing the Italian Official Naval Historian, p 210.

[130] *Ibid.*

[131] Playfair, *The Destruction of the Axis Forces in Africa*, p 190.

time. Allied air power had some but not immediately decisive effect on Axis supplies.

As the forward movement, but not the fighting, stopped in the Tunisian hills, Eisenhower struggled to set up an effective air organization.[132] In doing so he turned, not only to Spaatz, but to Air Chief-Marshal Arthur Tedder, the AOC Middle East and one of the premier airmen of the RAF.

In May 1941, at the age of 51 Tedder had become AOC-in-C, Middle East. He found himself in the midst of crises on several of the fronts he oversaw. In the Western Desert Rommel swept all before him, in Abyssinia the Italians still held out, in Iraq dissident Arabs attacked RAF airfields, daily air raids struck Malta, and the final stage of the Commonwealth evacuation from Greece had begun. The disastrous Battle of Crete and stern fighting in the Western Desert lay ahead. By December 1942, Tedder had already served over two years fighting the Axis in the Mediterranean. He had learned the bitter lessons of Crete and Tobruk and supplied lessons of his own at El Alamein and during the Axis retreat to Tripoli. No American air commander at that stage of the war matched his combat experience and practical knowledge in conducting air operations in the face of the German and Italian Air Forces. Under his and his subordinates' leadership, the RAF in the Middle East had become the Allies' most effective ground support air force. Tedder placed himself at Eisenhower's disposal--a display of inter-Allied cooperation much appreciated by the American commander.[133]

Before joining the British Army in 1914, Tedder had taken a degree in history from Cambridge and won the Prince Consort Prize for an essay on the Royal Navy of the Restoration during the 1660s. In 1916 he transferred to the Royal Flying Corps. After the war he served as an instructor at the RAF Staff College, in 1934 he served on the Air Staff as Director of Training and in charge of the Armaments Branch, and in 1936 he commanded the Far Eastern Air Force in Singapore. There he observed first hand the inter-service disputes that presaged the mis-managed defense of Malaya in 1941-42. In 1938 he became Director-General of Research and Development and virtually deputy to AM Wilfred Freeman, the man in charge of all RAF aircraft production until 1940. Upon leaving the Ministry of Aircraft Production he joined AM Arthur Longmore as Deputy Air C-in-C,

[132] Craven and Cate, *Torch to Pointblank*, p 108.

[133] Memo, for the Record dictated by Eisenhower to Capt. Harry Butcher, 10 December, 1942, *Eisenhower's Papers*, II, item 705, pp 823-825. This memo appears in a truncated version in Harry C. Butcher *My Three Years with Eisenhower, The Personal Diary of Harry C. Butcher, USNR Naval Aide to General Eisenhower, 1942--1945*, (New York: Simon and Schuster, 1946), p 220. See Tedder, *With Prejudice*, pp 372-373, for Tedder's description of events.

Middle East. For the next five months he assisted in the operations and administration throughout the vast theater under Longmore's purview. From December 1940 through January 1941 Tedder took direct command of the air forces assisting Lt Gen Richard O'Conner's Western Desert Force in its destruction of the Italian Tenth Army and conquest of Libya. When Churchill and Portal lost patience with Longmore's inability to do the impossible, they relieved him and appointed Tedder.[134]

Unlike Harris or Spaatz, Tedder was not identified with a particular type of aviation. Instead, during his wartime service in the Mediterranean Tedder had spent over two years in the pit of joint Army-Navy-Air action. He had learned how to balance the conflicting demands of the services while maintaining his own and his service's integrity. He became, out of self-defense, an expert in unified command. This entailed a deep seated belief in the necessities of joint service operational planning and unity of command for air power under air leaders. After the war he stated simply, "each of us--Land, Sea, and Air Commanders--had our own special war to fight, each of us had his own separate problems; but those separate problems were closely interlocked, and each of us had responsibilities one to the other. Given mutual understanding of that, you get mutual faith; and only with mutual faith will you get the three arms working together as one great war machine."[135]

Tedder had definite opinions on the North African command situation. A visit to Algiers in late November left him deeply disturbed. Eisenhower and his American staff had taken up quarters in a large hotel. The British had taken residence in the Naval Commander's flagship because of its excellent communications facilities. The two air forces had occupied headquarters miles from each other and from Eisenhower's Headquarters, known as Allied Force Headquarters (AFHQ). On November 27 he observed that Doolittle refused to cooperate on a mission requested by the EAC. Tedder objected to the "almost crazy" existing air organization. The two separate air forces needed a single commander, preferably an American with a "first class" British deputy. Tedder obviously realized the Americans, who furnished the majority of the aircraft, would not consent to an overall British air commander. He hoped to bolster the American head with a proven British backup.[136]

In late 1942 Tedder rendered more than advice to the Americans. On his return to Cairo from North Africa, on December 17,

[134] See Tedder, *With Prejudice*, for Tedder's early career.

[135] Arthur Tedder, "Air, Land and Sea Warfare," *The Royal United Services Institute Journal*, XCI, February 1946, p 64.

[136] Tedder, *With Prejudice*, pp 380-383.

Tedder took Brig Gen Craig with him "for the purpose of furthering his education."[137] In Cairo Craig visited the Combined War Room and the Joint Operations Staff, where Royal Navy, Army, and Air Force staffs worked hand in hand on operations, intelligence, and planning. When engine trouble delayed Craig's return flight, Tedder urged him to visit AVM Sir Arthur Coningham, AOC Western Desert Air Force (WDAF), at Marble Arch, Tripolitania. The WDAF provided close air support to General Bernard Montgomery's British Eighth Army.[138]

Arthur Coningham, a New Zealander who fought in the Australian-New Zealand Army Corps in World War I, had earned the nickname "Maori." This soon became corrupted by pronunciation to "Mary." A large man with a surprisingly high voice, he impressed most observers with his physical presence and his fervent championship of newly-developed British air support doctrine, which he claimed as his own. But he had not developed this doctrine by himself. Prior to his posting at Tedder's request to the Western Desert, in July 1941, he commanded No. 4 Group in Great Britain. This exposed Coningham to the machinery of air support being studied and developed by two Army Co-Operation Command officers.[139]

Although many consider Coningham the father of air support doctrine and he served as a conduit of that doctrine to the AAF, the method and technique of air-ground cooperation he used in the desert did not spring solely from his brow. As two modern British military historians have pointed out the growth of cooperation necessary to form and successfully operate a combined arms team of any sort, be it artillery-infantry, tanks-infantry, or air forces-army was slow and delicate, requiring time, copious amounts of good will, constant human contact and careful training. Combined arms cooperation did not become fully functional instantly or merely by decree.[140] In their excellent history of British military theory, Shelford Bidwell and Dominick Graham presented a thorough history of the development of British air support. They began by noting that the RAF had begun the war with intention of intervening on the battlefield only in a ground emergency. The dividing line between ground

[137] *Ibid.*, p 382.

[138] Memo,, Brig Gen H. A. Craig to CINC, AFHQ (Eisenhower), 23 December, 1942, Spaatz Papers, Diary.

[139] Sir Arthur Coningham, "The Development of Tactical Air Forces," a lecture delivered on 20 February 1946, *Royal United Services Institute Journal*, XCI (May 1946), p 213.

[140] Shelford Bidwell and Dominick Graham, *Firepower: British Army Weapons and Theories of War 1904-1945* (London: George Allen & Unwin, 1982), p 275.

and air operations would be the range limit of army artillery.[141] This proved unworkable during the campaign in France and was discarded in favor of closer air force-army cooperation. The RAF fostered this by forming an Army Co-operation Command. Its commander, AM Sir Arthur Barrett, and his two chief subordinates, Army Brigadier John Woodall and Group Captain Wann, produced an outstanding solution to the problem based upon an army-air control system created entirely by Woodall as a result of logical analysis.[142]

Woodall's system had four chief components. First came the requirement for a properly equipped air formation reserved for the direct support of the field army, but under RAF control. This formation, would have two tasks: (1) to shield the army from air attack by offensive action against enemy air and (2) to apply airborne firepower on the battlefield itself in a manner closely co-ordinated with ground operations. The second component of Woodall's plan called for a specially trained Army staff (Air Liaison Officers (ALO's)) able to explain air methods and limitations to soldiers and army methods of operation, plans, and situation to pilots assigned to the missions. The third component consisted of a joint command post or control center, the Army Air Control Center (AACC), staffed by Army and Air Force officers. The fourth and key element comprised a communications network of two links, one from the joint air-army headquarters directly to brigade or lower level subordinate fighting formations in the field, which by-passed intermediate headquarters, and another link direct from the joint command post to the airfields, where the ALO's had access to it. This linking of ground units to the air formations supporting them through only one intervening element greatly speeded up the delivery of air support to the forces needing it. Finally, at all headquarters in an army there was a signals section, called a "tentacle," after its appearance on an organization chart of the communications network. Each tentacle had a signals officer and a staff officer trained in air support.[143]

When Coningham arrived in the desert he found the Western Desert Air Force (WDAF) and the British 8th Army smarting from rough handling they had received in a costly, failed attempt to relieve the Axis siege of Tobruk (Operation "Battleaxe"). Both services saw the need to integrate their efforts. Into the breach stepped "Mary," who added the newly created air-ground method to ongoing joint exercises. In September the Army and RAF published "Middle East Training Pamphlet No. 3--Direct Air Support." The communications

[141] Bidwell and Graham, *Fire Power*, p 263. My description of the British air-ground cooperation method is based on the above work.

[142] *Ibid.*, p 264

[143] *Ibid.*, pp 264-265.

network envisioned by this pamphlet mirrored the network proposed by Woodall and even called the jointly staffed Air Support Control Headquarters (ASCs) established at each corps and armored division headquarters a "tentacle." Coningham had apparently gone Woodall one better by providing joint RAF/Army staffing for the forward links in the system. The ASCs accompanied the 8th Army for Operation "Crusader," which successfully relieved Tobruk in late November 1941.[144]

In May 1942 the RAF retreated along with the remainder of the British forces in their retirement to El Alamein. Once there the new system proved its worth during early September, in the defensive battle of Alam Halfa, Montgomery's first battle as commander of the 8th Army. Before the battle, Montgomery, a firm believer in army-air cooperation, and AVM Coningham had moved their headquarters to a common site, which allowed the AACC to remain in close touch with both army and air staffs. By October 1942, the British 8th Army had virtually perfected the system and used it with decisive effect in the Battle of El Alamein and the pursuit of Rommel's defeated Panzer Army.[145]

By the end of the campaign in the desert Coningham had modified Woodall's system. Woodall had designed his scheme for the purpose of insulating the RAF from Army command while providing the Army with air support. In the desert the most difficult problem was not preventing Army command of RAF units but rather in coordinating the operations of the RAF units themselves. The control of the air and of aircraft in the air revolved around the fighter. As Coningham stated, "the fighter governs the front."[146] The fighter gained air superiority over the enemy's fighters, defended against the enemy's strikes, and escorted friendly bombers. In recognition of this Coningham created a fighter group with a headquarters and an air control center and placed it at a command level directly below the adjacent 8th Army/Western Desert Air Force Headquarters. The fighter group relieved Coningham's headquarters of the burden of detailed operational control. This left WDAF Headquarters free to concentrate on planning and overall direction of operations. The fighter group control center contained an Army Gun operations

[144] I.S.O.Playfair, F.C. Flynn, C.J.C. Molony, and S.E.Toomer, *The Mediterranean and Middle East*, Vol. II, *The Germans Come to the Help of Their Ally (1941)* (London: HMSO, 1956), pp 294-295. This work supplied the chronology for Coningham's efforts after his assumption of command.

[145] *Ibid.*, pp 268-269.

[146] Speech, Coningham to Senior Officers, Tripoli, 16 February 1943. PRO AIR 20/5533.

room,[147] an air controller, a duty signals intelligence officer ("Y"), an operations officer and two forward bomber control officers. They plotted aircraft tracks on their operations table and had the necessary radio equipment for controlling aircraft. All bomber, fighter/bomber, and tactical reconnaissance missions were coordinated through the control center. The fighter group headquarters and control center were located as close as possible to the majority of the airfields, which enabled rapid communication by secure ground lines.[148] This modification curtailed the role of the AACC and the tentacles, reducing them to the status of a specialized communications network divorced from command.

Coningham's cardinal principle was that the enemy air force must be driven from the sky before any other air operations can succeed. This called for focusing maximum force on an initial counter-air campaign. Consequently he considered the employment of air assets in scattered groups and small numbers, called "penny packets," tied closely to ground troops and conducting purely defensive functions, an anathema. Penny packets prevented the concentration of force necessary to win the crucial counter-air battle. The achievement of air superiority by aggressive offensive action against enemy aircraft and airfields freed friendly air forces to exercise their flexibility and capacity for rapid concentration at the decisive point. When conditions did not require concentration, an air force with air superiority could roam over and behind the battlefield at leisure, harassing or destroying enemy ground formations and supply lines. As a corollary, Coningham believed in the centralized control of air operations by an airman working in close cooperation with, but not under the direct supervision of, the ground commander.

Coningham situated his air headquarters in a tent directly adjacent to Montgomery's own. Coningham maintained that air officers had trained for their task, and one ought to allow them to do it without kibitzing from army types with little idea of, or sympathy with, air problems. Needless to say, the RAF's independence from the

[147]The Army Gun operations room coordinated RAF activities with Army artillery to prevent guns and aircraft from interfering with each others' missions and from attempting fire missions better suited to either air or ground capabilities. For instance, aircraft could not safely fly into an area already under artillery fire while aircraft could fly sorties beyond artillery range. There was no need to send air to attack a target undergoing the more accurate fire of artillery.

[148] Rpt, "Report on Visit of Air Marshal Sir Trafford Leigh-Mallory to North West Africa, March/April, 1943," April 1943, part II, pp 4, 6-7, para. 21-22 and 34-44. PRO AIR 20/4521. Leigh-Mallory's sole purpose in visiting North Africa was to examine the tactical air command and control arrangements and their applicability to the cross-channel invasion. His exposition of the scheme he found in operation in the WDAF should be considered authoritative.

Army greatly assisted Coningham in the realization of his ideas.[149] Coningham lost no time inculcating his strictures to Craig, who proved a willing convert. Craig's initial report gave Spaatz, and through him the AAF hierarchy, additional insight into British method.

Unfortunately, Coningham's and Montgomery's new found skills made little difference in the early stages of the North African Campaign. The Americans had yet to put their doctrine into practice and the British had not yet fully assimilated the lessons of the Western Desert. Not until February 1943 did the hard learned experience of the Western Desert Air Force begin to influence all the Allied forces in Africa.

Within four days after Christmas 1942, Eisenhower concluded that the lull in intensive air activity provided the opportunity to jettison the temporary command arrangements of early December. He informed Marshall that after long discussions with Tedder, Spaatz, and Coningham and after careful study, "I have come to the conclusion that a single air commander is necessary... ."[150] At first Eisenhower wanted Tedder for the position, but upon further consideration chose Spaatz. Eisenhower presented several arguments in favor of his choice. He noted of Spaatz that, "he is a sound organizer and has gained, through operating as my deputy commander for air, a very fine picture of our problem here, as well as its relationship with the Mideast and with Great Britain. He is a fine officer and will do a good job."[151]

If Marshall approved of the proposal, then Eisenhower intended to present it to the U.S.-British Combined Chiefs of Staff (C.C.S.) Eisenhower did not expect the British to object to the naming of an American to the overall command because they knew Spaatz and because the Americans supplied the bulk of the bombers and a considerable portion of the fighters to the new command.[152] Eisenhower capped his reasons two days later, when he wrote to Marshall, stating he considered it essential that his air commander retain control of the U.S. heavy bombers in the United Kingdom, something Spaatz could do and Tedder could not.[153] As long as Spaatz remained the Commanding General, AAF in the European Theater of Operations, he could call down reinforcements from the U.K. The British,

[149] Coningham, "The Development of Tactical Air Forces," p 215.

[150] Msg, 3486, Eisenhower to Marshal, 29 December, 1942, *Eisenhower's Papers*, II, item 743, p 874.

[151] *Ibid.*

[152] *Ibid.*

[153] *Ibid.*, Msg.3626, Eisenhower to Marshall, 29 December, 1942, item 746, p 878.

because of their need to ensure the protection of their homeland, would have a more difficult time in doing the same. Therefore, Eisenhower wanted to guarantee his ability to obtain timely air reinforcements.

Churchill and Portal did not care for the appointment of a man with little field experience in the command and administration of a mixed air force to the command of all Allied air forces in North Africa.[154] But, after some grousing, they consented on condition that Spaatz appoint a British officer as his deputy and that his staff contain a British officer experienced in maintenance and supply.[155] This acquiescence also hinged on their perception that the proper air command arrangements in North Africa would soon be reconsidered at the up-coming meeting of President Roosevelt, Prime Minister Churchill, and their Combined Chiefs of Staff at Casablanca.

Eisenhower found the British stipulations acceptable. On January 5, 1943 he appointed Spaatz Commander of the Allied Air Force and Air Vice Marshal Robb as deputy. Eisenhower compromised in an attempt to follow British suggestions as to the internal structure of the Allied Air Force. They recommended that all Anglo-American aircraft, irrespective of their nationality, be grouped according to their functions, logistic possibilities, and tactical requirements. Because of both British and American statutes, which tied military promotions, discipline, and other functions to the existing Twelfth and EAC organizations, Eisenhower did not wish to, nor could he dispense with them. Consequently, he gave the EAC control of general reconnaissance, a striking force to hit enemy shipping and an air support force to cooperate with the British 1st Army. The Twelfth received the tasks of conducting strategic heavy bombing missions, and of providing close air support to the American II Corps in Tunisia. The two existing organizations had by now solved many of the tough administrative and logistical problems facing them in North Africa and to dissolve them might reopen Pandora's box. The new arrangements lasted until the Casablanca Conference in mid-January.[156]

These new arrangements did not ease the Twelfth's basic logistics problem. Spaatz reported to Eisenhower, on January 1, that lack of transport prevented any air buildup to support a ground offensive. Two days later, Spaatz repeated to Eisenhower that the fields at the front needed stockpiling of supplies and preparation. He also asked for a higher priority in allocation of supplies sent forward. The day before his departure for Casablanca (January 19), Spaatz instructed his forces to take advantage of the lull in fighting to strengthen the

[154] Tedder, *With Prejudice*, p 385.

[155] Craven and Cate, *Torch to Pointblank*, p 109.

[156] *Ibid.*

buildup of repair and maintenance capability and to get replacement aircraft to the front as rapidly as possible. On January 20, he inspected Marrakesh, the African terminus of the AAF South Atlantic air ferry route, to clarify the responsibilities of the rear area services of supply and training. All these actions helped to insure maximum effort in the task of untangling the knotted logistics situation.[157]

The German's halted the Allied drive on Tunis twenty-five miles short of its goal. A margin of defeat so narrow that a slight change in any of several factors might have brought a different outcome. The men on the spot could not hold back the rainy season, nor overcome an overloaded transport system, nor build hard surfaced airfields in an instant, nor correct badly loaded ships. For both air and ground the first phase of the Tunisian campaign was a logistical nightmare. By the end of November the forward airfields were so overloaded that Eisenhower's Assistant Chief of Staff for Air, AVM A.P.M. Sanders, reported that it was "imperative that no more U.S. air squadrons should be brought to the East from the Oran and Casablanca areas until the situation regarding airfields and supplies to them can be improved." Sanders sternly stated, "*it is useless to send operational air units to them (forward airfields) until transportation and communications to keep them effectively supplied and controlled can be established* (italics in original)."[158]

Spaatz worked to rectify many of the air problems and in the month of December 1942 he made solid, if unspectacular progress, toward the solution of the logistical problems. He made less headway in the areas of providing close air support, interdiction, and the gaining of air superiority, because they required the prior settlement of the logistics morass. Successful tactical air operations required a superiority in aircraft at the front. That superiority could be achieved either by an overwhelming number of aircraft at all points or by the concentration of the planes available at the key points. Both necessitated better logistics. More planes needed more fields and supplies. Concentration at the key points needed better command and control of available aircraft. The creation of the Allied Air Force attempted to clarify lines of command and thereby ease the ability to concentrate both air forces on one objective. Control of aircraft in the air, which would greatly increase the offensive and defensive power of Allied fighters, awaited the delivery and installation of adequate radio and radar equipment, another function of the logistics system.

[157] Command Diary Entries 1, 3, 18, and 20 January, 1943, Spaatz Papers, Diary.

[158] Memo, Sanders to Eisenhower, Subj: "Problems Connected with the Development of Allied Air Power in the North African Theater," 30 November 1942. PRO AIR 23/6561.

In the next phase of the campaign Spaatz directly addressed the problems of tactical air.

Chapter II

Failure and Reorganization (January - March 1943)

> I have mentioned the need for mutual understanding and mutual faith. This, in the ultimate, comes down to personalities. One thing I have learnt in this late war is that the personality of the few men at the top--commanders and staff--matters far more than I conceived.[1]
>
> Sir Arthur Tedder, January 9, 1946.

The Casablanca Conference

From January 14-24 Winston Churchill, Franklin Roosevelt, and their Combined Chiefs of Staff met at Casablanca, in French Morocco, to settle the Western Alliance's war strategy for 1943. This resulted in a policy decision to continue their main effort against the Axis Powers in the Mediterranean and to postpone the major invasion across the English Channel into France until 1944. The decision affected both the forces then fighting the Axis in North Africa and the buildup of forces in Great Britain.

The conference divided Allied forces fighting the European Axis powers into two separate theaters, North Africa and England. Thereupon the Americans, for their own administrative purposes, formed a separate North African Theater of Operations (NATO) to support the

[1] Tedder, "Air, Land and Sea Warfare," *RUSI*, XCI (February 1946), p 65.

campaign in Tunisia and subsequent operations in the Mediterranean, while maintaining the previously established European Theater of Operations (ETO) to support the strategic bomber offensive against Germany and to prepare for the cross-channel invasion. An AAF officer, Lt Gen Frank Andrews, replaced Eisenhower as Commanding General U.S. Army ETO, while Eisenhower became Commanding General, U.S. Army NATO. Eisenhower also retained his position as overall Allied Commander in North Africa. Andrews's responsibilities included the prosecution of the U.S. portion of the U.S.-British Combined Bomber Offensive (CBO). This offensive, directed against Germany and occupied Europe, received the endorsement of the conferees who called for "the heaviest possible bomber offensive against the German war effort,"[2] whose ultimate goal would be "the progressive destruction and dislocation of the German military, industrial and economic system, and the undermining of the morale of the German people to a point where their capacity for armed resistance is fatally weakened."[3]

The selection of Andrews to fill this post disappointed Spaatz. He wanted to direct the Combined Bomber Offensive himself and had even asked Arnold at Casablanca, if he could return to the Eighth. Arnold told him no because the new assignments had already been planned at the "very highest levels."[4] Spaatz did not allow this setback to weaken his efforts in North Africa.

The Casablanca Conference spawned yet another reorganization of Allied air power in North Africa, this one along the lines suggested by the British in their earlier proposals. Tedder became Air Commander-in-Chief Mediterranean, in charge of Allied air in both the North African and the British Middle East theaters of war. He had two principal subordinates--an air commander for the Middle East (ACM Sir Sholto Douglas) and an air commander for Northwest Africa (Spaatz). Spaatz's combat elements, the U.S. Twelfth Air Force and the British Eastern Air Command plus the Western Desert Air Force (including the U.S. Ninth Air Force), which had not yet arrived from Tripolitania, would split to form three functional commands. Doolittle, recently promoted to Major General, would oversee the Northwest African Strategic Air Force (NASAF) composed of heavy and medium bombers, and their escorting fighters. This force would

[2] Maurice Matloff, *United States Army in World War II*, subseries: *The War Department, Strategic Planning for Coalition Warfare, 1943-1944* (Washington D.C.: GPO, 1959), p 28 citing Combined Chiefs of Staff Document CCS 155/1, 19 January, 1943.

[3] *Ibid.*, citing CCS 166/1/D, 21 January 1943, "The Bomber Offensive from the United Kingdom."

[4] Command Diary Entry, 23 February, 1943, Spaatz Papers, Diary.

bomb Axis ports in Italy and Tunisia, attack Axis shipping in transit, and assist the other two air forces if necessary. Air Marshal Coningham would head up the Northwest African Tactical Air Force (NATAF) composed of Allied fighter-bombers, light and ground attack bombers, and a force of fighters. This force would provide ground support for the newly formed 18th Army Group, which would take command of all Allied ground forces in Tunisia. Air Marshal Hugh P. Lloyd would command the Northwest African Coastal Air Force (NACAF) composed of fighters, long range reconnaissance aircraft, and anti-submarine planes. This force would protect Allied shipping and ports.[5]

The Casablanca Conference provided Arnold with the opportunity to propound the AAF's strategic views before Roosevelt, Churchill, and their combined military staffs. The AAF also had to stave off a last British attempt to shunt the American bomber force from daylight bombing to night operations. This proposal had the support of the Prime Minister, who became Arnold's major target in a campaign to preserve daylight precision bombing.

The AAF's inability to mount a single bombing raid on the German homeland in the thirteen months since the U.S.'s entry into the war had sired the Prime Minister's doubts. As late as mid-September 1942 Churchill expressed unreserved support of Spaatz and U.S. daylight heavy bombing. In a personal message to Roosevelt, he asked for more B-17s observing, "a few hundred fortresses this autumn and winter, while substantial German Air Forces are still held in Russia may well be worth many more in a year's time when the enemy may be able greatly to reinforce his Western Air Defences." Churchill went on, "I am sure we should be missing great opportunities if we did not concentrate every available fortress and long range escort fighter as quickly as possible for the attack on our primary enemy."[6]

Within a month the Prime Minister began to take an entirely opposite tack. Opinion within the Air Ministry split. Portal expressed skepticism at the claims of fighters downed by the B-17s and the chances of successful bombing of Germany. "It is rash to prophesy," he told Churchill, "but my own view is that only very large numbers (say 400 to 500) going out at one time will enable the Americans to bomb the Ruhr by daylight with less than 10% casualties and I doubt even then the bombing will be very accurate."[7] Portal indicated a willingness to delay tackling the problem with the Americans until the end of the year, after the American elections and after the AAF had a

[5] Craven and Cate, *Torch to Pointblank*, pp 114, 162-163.

[6] Msg, C-150, Churchill to Roosevelt, 16 September 1942, Kimball, *Churchill & Roosevelt: The Complete Correspondence*, I, pp 597-598.

[7] Minute, Portal to Churchill, 13 October 1942, PRO AIR 8/711.

chance to ride out a press uproar over the inferior quality of its fighter aircraft.[8]

The Assistant Chief of the Air Staff (Policy), Air Vice Marshal John Slessor, the RAF senior officer with perhaps the clearest understanding of the American determination to carry through with daylight precision bombing, and the civilian head of the RAF, Secretary of State for Air Sir Archibald S.M. Sinclair, warned of the dangers of appearing to thwart the American designs. While admitting Spaatz and his other American friends were "a bit unwarrantably cockahoop" over the success of their early raids, Slessor spoke of their professionalism and determination to succeed concluding, "I have a feeling they will do it."[9]

On October 16 Churchill sent a message to Harry Hopkins that the results achieved to date by the B-17s' shallow penetrations, under mainly RAF escort, "does not give our experts the same confidence as yours in the power of the day bomber to operate far into Germany." Churchill asked Hopkins to look into the matter "while time remains and before large mass production is finally fixed."[10] The Prime Minister expressed himself more bluntly within his own government. In a note on air policy he predicted a disaster for the Americans as soon as they ventured out from under British escort. Churchill suggested diverting the Americans to anti-submarine patrols and night bombing. As for U.S. aircraft production, Churchill urged that the Americans take up night bomber production on a large scale.[11] Sinclair immediately took up the challenge. The Americans had come to a critical point in their allocation of air priorities, stated the British Secretary for Air, and if the Prime Minister pressed for conversion to night bombing, setting himself "against their cherished policy of daylight penetration," he would confound those very groups in the American military which wished to build up big bomber forces in England during 1943 and 1944. "It would be a tragedy if we were to frustrate them on the eve of this great experiment. To ally ourselves with the American Navy against General Spaatz and General Eaker and the United States Air Force in this country, and to force them into diverting their highly trained crews to scaring U-Boats instead of bombing Germany would be disastrous." Sinclair continued just as forcefully, "It would weaken and alienate the very forces in the United States on which we depend for support in a European as opposed to a Pacific strategy and for the production of heavy bombers as distinct from the

[8] Minute, Portal to the Secretary of State for Air (Archibald M.S. Sinclair), 27 September 1942, PRO AIR 8/711.

[9] Minute, Slessor to Portal, 26 September 1942, PRO AIR 8/711.

[10] Msg, T.1345/2, Churchill to Hopkins, 16 October 1942, PRO AIR 8/711.

[11] Note on Air Policy, W.S. Churchill, 22 October 1942, PRO AIR 8/711.

types which it is so much more easy to produce in quantity."[12] The Prime Minister replied that Sinclair's impassioned plea had neither convinced him of the "merits" of daylight bombing nor of the tactics to pursue toward the Americans.[13]

A few days later, Sinclair, speaking for both himself and Portal, reiterated his arguments: "we feel bound to warn you most seriously against decrying the American plan for daylight attack of GERMANY." The Secretary went on, "we are convinced that it would be fatal to suggest to them at this of all times that the great bomber force they are planning to build up is no good except for coastal work and perhaps ultimately night bombing." Sinclair pointed out the difficulties Spaatz had encountered in training and keeping an adequate force and spoke of his determination not to fly over Germany with inadequate numbers and half-trained gunners.[14] In November Portal advised the Prime Minister against premature scuttling of the American effort. "I do not think we can decide what to do until we have balanced the probability of success, which may not be very high but is not negligible *{pen and ink change in original}* against the results of success if achieved." Success would have tremendous consequences in wastage for the *Lüftwaffe* fighter forces and destruction of German industry. "It is solely because of the great prizes that would be gained by success that I am so keen to give the Americans every possible chance to achieve it." Portal, however, suggested that the Americans also be encouraged to press on with night adaptations and alternate day methods in case daylight precision bombing failed. He, too, repeated the fear that premature opposition to daylight bombing would lead to commitment of American resources to other theaters.[15] On November 21 Portal took the additional step of asking the RAF Delegation in Washington to press Arnold for an attack on Germany "at the earliest possible moment without waiting for the build-up of a very large force." The inability of the AAF to bomb the *Reich* weakened Portal's defense of the shipping priorities for the aviation fuel, personnel, and supply requirements of the Eighth Air Force as well as American bombing policy in general.[16]

Churchill remained unconvinced. In mid-December he noted that the effect of the American bombing effort judged by the numbers of sorties, bombs dropped, and results obtained against the enormous quantities of men and material involved, "has been very small indeed."

[12] Minute, Sinclair to Churchill, 23 October 1942, PRO AIR 8/711.

[13] Minute, Churchill to Portal and Sinclair, 26 October 1942, PRO AIR 8/711.

[14] Minute, Sinclair to Churchill, 28 October 1942, PRO AIR 8/711.

[15] Minute, Portal to Churchill, 7 November 1942, AIR PRO 8/711.

[16] Msg, 408, Air Ministry {Portal} to RAF Delegation {Slessor}, 21 November 1942, PRO AIR 8/711.

During the past two months he had, "become increasingly doubtful of the daylight bombing of Germany by the American method." If his ally's plan failed, "the consequences will be grievous." The collapse of daylight bombing would stun American public opinion, disrupt an industrial effort increasingly committed to production of bombers unsuitable for night work, and render useless the tens of thousands of American air personnel and their needed airfields in the United Kingdom.[17] Perhaps for domestic political reasons (a certain percentage of the British population objected to the ubiquitous presence of their Allies[18]), the large, seemingly useless, mass of AAF personnel in the U.K. (which would eventually be dwarfed by the million Americans in England before the Normandy invasion) particularly raised the Prime Minister's ire. He returned to it time and again throughout the course of the debate. Nonetheless, Churchill had fixed his policy: "we should, of course, continue to give the Americans every encouragement and help in the experiment which they ardently and obstinately wish to make, but we ought to try to persuade them to give as much aid as possible (a) to sea work and (b) to night bombing, and to revise their production, including instruments and training for the sake of these objects."[19]

Churchill's persistence in recommending anti-submarine work reflected the uncertain status of the Battle of the Atlantic in late 1942. The British were losing merchant shipping faster than they could replace it. British import tonnage, the life's blood of an economy not blessed with overwhelming native supplies of raw materials and agricultural resources, had fallen from a pre-war annual average of 50 million tons to 23 million tons in 1942. Even the most stringent shipping measures could not close the gap between imports and domestic requirements, which forced the British to consume internal stocks reducing them to the irreducible minimum needed to support the British war effort. In early November the British came hat in hand to Washington to plead for an additional 7 million tons of U.S.-built shipping, a request Roosevelt granted without even consulting

[17] W.P. (42) 580, Note by the Prime Minister and Minister of Defence, Subj: Air Policy, 16 December 1942, PRO PREM 3/452/1.

[18] The British reduced this resentment to a single phrase which nicely summed it up--the Yanks were "Over paid, over-sexed and over here!" At the end of August 1942 8th Air Force personnel in Great Britain numbered approximately 30,000. By the end of November 1942 transfers to the 12th Air force left only 23,000 AAF personnel in England. The January 1943 rolls carried 36,000 personnel. (See Craven and Cate, *Torch to Pointblank*, pp. 599-600.) American forces as a whole dropped from 228,000 in October to 135,000 at the end of the year, to 105,000 by the end of February 1943. (See Leighton and Coakley, *Global Logistics*, p. 487.)

[19] W.P. (42) 580, Note by the Prime Minister and Minister of Defence, Subj: Air Policy, 16 December 1942, PRO PREM 3/452/1.

the military.[20] But it would take months for the American yards to deliver the ships and in the meantime Churchill felt that a diversion of the American bombing effort to sea work would pay greater dividends in saved shipping, while a reduction in the American forces stationed in the U.K. would conserve tonnage.

Sinclair continued to resist what he considered a doubtful policy. While he admitted that the RAF might be wrong in its perception that the Americans would pick up their toys and go to the Pacific if threatened, his officers were convinced "any attempt to divert the American Air Forces from the function for which they have been trained to a subsidiary role over the sea or in secondary theaters would be fiercely resented and vigorously resisted." If daylight bombing proved unsuccessful then the Americans themselves would abandon it and turn to night action. "They will not turn aside from day bombing," estimated Sinclair, "till they are convinced it has failed: they will not be convinced except by their own experience."[21] Writing just a few days before the Casablanca Conference, Sinclair counseled patience, advising that at the present stage it would be wrong to discourage the Americans from what might still be a successful experiment.[22]

All this drew an exasperated retort from Churchill. The Americans had not even begun their experiment and when they did it could take four or five months to convince them one way or the other. "Meanwhile I have never suggested that they should be 'discouraged' by us, that is to say we should argue against their policy, but only that they should not be encouraged to persist obstinately and also that they should be actively urged to become capable of night bombing. What I am going to discourage actively," the Prime Minister stated, "is the sending over of large quantities of these daylight bombers and their enormous ground staffs until the matter is settled one way or the other."[23] Churchill had not made up his mind against daylight precision bombing, but the time was obviously fast approaching when daylight precision bombing must begin to justify itself by deed rather than potential. Without results the Prime Minister could no longer accept the expenditure of resources devoted to the project. But his threat to halt the buildup of U.S. heavy bomber groups could in the end jeopardize the entire experiment. The precision bombing concept, whatever its emphasis on bombing accuracy, included a

[20] Leighton and Coakley, *Global Logistics*, pp 677-679.

[21] W.P. (42) 616, Note by the Secretary of State for Air, Subj: Air Policy, 29 December 1942, PRO PREM 3/452/1.

[22] Note by the Secretary of State for Air, Subj: The Bombing Policy of the U.S.A.A.F., n.d. (9 January 1943), PRO AIR 8/711.

[23] Minute 26/3, Churchill to Sinclair, 10 January 1943, PRO PREM 3/452/1.

large measure of attrition, for both friend and foe, in its formula for success. Without sufficient logistical backup, including large numbers of air crews and bombers, the American effort could not succeed.

The Americans probably first learned officially of Churchill's attitude in an exchange of memorandum between the American and British Chiefs of Staff in late December and early January. These memos served as the basis of initial discussion at Casablanca. In the memos each staff expressed its view on the most advantageous strategy for the alliance to follow in 1943. The Americans wished to hold the North African and Pacific theaters to minimum commitments while mounting a large-scale invasion from England into France in 1943. The British favored a continued offensive in the Mediterranean and a more gradual build up of ground forces in Great Britain.[24] The clash between the Allies' positions constituted the major story of the conference. The British, who had the majority of the troops under arms, the aircraft, and the shipping, won the dispute, much to the chagrin of Marshall and the Americans. The position of American air power in 1943 played a minor role in the struggle between the American advocacy of the direct strategy versus the British support of the indirect approach.

In the initial policy memos both countries called for air offensives against Germany and Italy. The Americans urged "an integrated air offensive on the largest practicable scale against German production and resources, designed to achieve a progressive deterioration of her war effort."[25] The British Chiefs echoed that call and recommended a combined U.S.-U.K. heavy and medium bomber force of 3,000 planes in Great Britain by the end of 1943. But while the British gave full endorsement to night bombing they questioned the efficacy of day bombing. "In spite of the progress made during recent months by the United States Bomber Command in the bombing of targets in occupied territory, it is still an open question whether regular penetration of the defenses of Germany by daylight will be practicable without prohibitive losses." The British added, "while every effort should continue to be made to achieve success by day, it is important to arrange that, if the daylight bombing of Germany proves impracticable, it will be possible to convert the United States Bomber Com-

[24] Documents C.C.S. 135, Memo, by the U.S. Chiefs of Staff, Subj: Basic Strategic Concept for 1943, 26 December 1942, C.C.S. 135/1 Memo, by the British Chiefs of Staff, Subj: Basic Strategic Concept for 1943--The European Theater, 2 January 1943, and C.C.S. 135/2, Subj: American-British Strategy in 1943, 3 January 1943, published in Department of State, *Foreign Relations of the United States: Conferences at Washington, 1941-1942 and Casablanca, 1943* (Washington, D.C.,: GPO, 1968), pp 735-752.

[25] C.C.S. 135, Subj: Basic Strategic Concept for 1943, *FRUS: Washington-Casablanca*, p 737.

mand from a primarily day to a primarily night force with the least possible delay and loss of efficiency."[26] If he had not earlier received warnings from friends on the RAF Staff, Arnold must have quickly learned from them after receipt of the memo that it reflected the Prime Minister's opinions.

The abandonment of day bombing, the rock upon which all the AAF's hopes stood, was unthinkable. No matter how reasonable the British suggestion to at least consider and prepare for the possible failure of the experiment appeared, it could not be accepted, lest it in any way undermine the project. Once Arnold learned of Churchill's determination to question American bombing he marshalled some of his biggest guns--Spaatz, Andrews, and Eaker--to help in the effort of persuading "Big Boy" (Churchill's code name in the pre-conference planning) to change his mind. The night before the conference opened, January 13, Eaker was ordered to Casablanca. There he worked frantically to prepare a brief to present to the Prime Minister, who had consented to see him.[27] On January 20, Spaatz, Andrews, and Eaker all met Churchill.

Eaker proved by far the most convincing. In his memoirs, written eight years after the event, Churchill admitted his frustration with American bombing, "it was certainly a terrible thing that in the whole of the last six months of 1942 nothing had come of this immense deployment and effort, absolutely nothing, not a single bomb had been dropped on Germany." The intensity of Eaker's defense, which included a promise to attack Germany proper with 100 bombers a minimum of two or three times before February 1, and frequently thereafter,[28] and the telling point he made concerning the advantages of round-the-clock bombing of Germany, changed the Prime Minister's mind. "Considering how much had been staked on this venture by the United States and all they felt about it," stated Churchill, "I decided to back Eaker and his theme, and I turned around completely and withdrew all my opposition to the daylight bombing by the Fortresses."[29] Eaker recalled that Churchill merely agreed to allow the AAF more time to prove its case.[30] Eaker's recollection seemed the most probable. As Churchill had stated ten days before the conference, he was not opposed to daylight bombing; he

[26] C.C.S. 135/2 Subj: American-British Strategy, 3 January 1943, *Ibid.*, pp 746-747.

[27] Parton, *"Air Force Spoken Here,"* pp 217-220.

[28] Papers given to the Prime Minister by General Eaker (20 January 1943), PRO PREM 3/452/1.

[29] Winston S. Churchill, *The Second World War*, Vol. IV, *The Hinge of Fate* (Boston: Houghton Mifflin Company, 1950), p 679.

[30] Parton, *"Air Force Spoken Here,"* pp 221-222.

simply wished to encourage nighttime bombing as a reasonable alternative. What Spaatz, Andrews, and Eaker accomplished was to confirm the advice the Prime Minister had already obtained from the RAF Staff and the Secretary of State for Air. The Americans would not abandon daylight bombing until they were convinced it had failed. The Americans were willing to devote vast amounts of human and material resources to ensure success. And an attack on daylight bombing could not help but alienate the AAF, jeopardizing British aircraft allocations and slowing the bomber buildup in Great Britain. The Americans had bet enormous stakes on daylight bombing and the Prime Minister, who always felt that night bombing would offer a quicker payoff, realized that they could not be asked to hedge their bet at this particular point of time. Having won the main point of the conference by keeping the Mediterranean front open (discomforting the American Army and its Chief of Staff in the process) it would be folly to risk the good will of the AAF and further hard feelings over a matter that would prove itself one way or the other in a few months.

On January 27 Eaker partially fulfilled his promise to the Prime Minister. He dispatched 91 heavy bombers against the Emden U-boat yards. Four more raids into Germany, none of larger than 93 planes, followed in February.[31]

During his 24-hour stay at Casablanca Spaatz talked to both heads of government. He apparently left his meeting with Churchill and went directly to Roosevelt, with whom he met from 10:00 A.M. to 11:30 A.M. No official record of the meeting exists, nor did Spaatz refer to it in his records. Only Elliott Roosevelt, one of the President's sons, left an account. The younger Roosevelt said that Spaatz explained the operational difficulties encountered in Tunisia, such as lack of replacement planes and hard surfaced runways, and that Spaatz spoke of the difficulties of combined command.[32] This account does not ring true.

Elliott Roosevelt had Spaatz talking of the difficulty of serving under Tedder, when, as of January 20, 1943, Spaatz had yet to come under that officer's command. What Spaatz may have explained was the difficulty in coordinating the operations of the EAC and the Twelfth Air Force because of inadequate signal organizations and different staff procedures. Given the AAF's concern over the British threat to daylight bombing and Spaatz's familiarity with the problems of the entire AAF effort in Europe it seems unlikely that the President and the general did not discuss daylight bombing. Especially in light

[31] Craven and Cate, *Torch to Pointblank*, p 843.

[32] Elliott Roosevelt, *As He Saw It* (New York, N.Y.: Duell, Sloan, and Pearce, 1946), pp 100-102.

of Arnold's statement that the President as well as Churchill and Portal questioned him at the conference on the failure to bombard Germany.[33] If Churchill continued to press for conversion to night bombing then Roosevelt would have to be persuaded to resist. Churchill's reversal, however, eliminated the need for special and immediate support from the President.

Spaatz also discussed operations and organization with Marshall, Portal, and Arnold while at Casablanca.[34] Arnold, no less frustrated than Churchill over the inability of the Eighth Air Force to bomb Germany, had hard questions. Spaatz did his best to lance his chief's frustration before it came to a head. Years later Spaatz recalled, "I remember having a heart to heart talk with Hap, walking along the beach. We talked very, very frankly about daylight bombing and whether it should be carried out or not."[35] Spaatz went on to predict that, in time, British night losses would exceed American daylight casualties. Arnold did not find Spaatz's or Eaker's arguments completely convincing. A month later he complained to Stratemeyer that both, "gave the usual and expected reasons for not operating against Germany. Their reasons for not operating more frequently, however, seemed very weak."[36]

On January 21 the Combined Chiefs of Staff issued their first directive on the bomber offensive from the U.K. They ordered the British and American bomber commanders to "take every opportunity to attack Germany by day, to destroy objectives that are unsuitable for night attack, to sustain continuous pressure on German morale, to impose heavy losses on the German day fighter force, and to contain German fighter strength away from the Russian and Mediterranean theaters of war." The directive specified five targets in priority order: German submarine construction yards; the German aircraft industry; transportation; oil plants; and other targets in the German war economy. It also authorized attacks on Berlin, "which should be attacked when conditions are suitable for the attainment of especially valuable results unfavorable to the morale of the enemy or favorable to that of Russia." Finally, the directive ordered the Allied bomber

[33] Memo, Arnold to Stratemeyer, Subj: Bombing of Germany by U.S. Bombers from England, 26 February 1943, Arnold Papers, Box 49.

[34] Command Diary Entry, 19 January 1943, Spaatz Papers, Diary.

[35] Spaatz-Shaughnessey Interview, pp 66-67.

[36] Memo, Arnold to Stratemeyer, Subj: Bombing of Germany by U.S. Bombers from England, 26 February 1943, Arnold Papers, Box 49.

commanders to support the Allied armies when it came time for the cross channel invasion.[37]

Eaker had gained his chance to conduct the daylight bombing experiment. Unfortunately for him, the calls of other theaters for shipping and planes effectively reduced the Eighth Air Force to the lowest priority. This starved him of resources, hamstringing him throughout his tenure in England.

Operations, Personalities, and Teamwork

The postponement of the Allied offensive in late December because of bad weather, exhaustion of front line troops and aircraft, and the need to bring up reinforcements, most of them American, led to the formation of an overall American ground command in Tunisia: the U.S. II Corps. II Corps would occupy central Tunisia taking position on the right of the Allied line. The British 1st Army occupied Allied left, while the under-equipped French XIX Corps occupied defensive positions in the relatively impassable center of the Allied lines. If all went well Eisenhower hoped to have II Corps drive to the coast, separating the Germans in Tunisia from Rommel's forces retreating from Libya. Eisenhower exercised direct operational control over the American, British, and French national contingents. At the front no unified ground command existed.

The air organization paralleled the ground forces' division into national contingents. Spaatz charged the EAC with the responsibility of supporting the 1st Army and the Twelfth with responsibility for supporting all U.S. land forces in North Africa.[38] The French had a small force of their own aircraft but were dependent on their Allies for air support. Neither the EAC's 242 Group nor the Twelfth's XII Air Support Command, the subordinate organizations charged with cooperating with the land forces, were assigned directly to the land forces they assisted.[39] In fact, at no time during the campaign were AAF combat units, as opposed to observation and reconnaissance units, ever directly assigned or attached to U.S. Army units. When

[37] C.C.S. 166/1/D Memo, by the Combined Chiefs of Staff, Subj: The Bomber Offensive from the United Kingdom, 21 January 1943, published in *FRUS: Washington-Casablanca*, pp 781-782

[38] General Order No. 1, Headquarters Allied Air Force, 7 January 1943, Spaatz Papers, Diary.

[39] See *Ibid.*, Command Diary Entry, 17 January 1943. This entry makes clear that the Commander of XII ASC would control air decisions not the commander of II Corps.

the Allies began to contemplate moving a large American ground formation into the front line there may have been some thought given to creating an American army to control the U.S. ground forces in Tunisia rather than an American corps.[40] On December 30 Spaatz and Lt Gen Mark Clark, the Commanding General of the American Fifth Army, then forming and training in the western TORCH area, toured the battle area. Political considerations probably scotched the move. An American army would have competed in prestige with Anderson's 1st Army and if defeated would have lost a commensurate amount of prestige for the inexperienced Americans. Furthermore the size of the contemplated American force, little more than a reinforced division to start with, hardly justified an army headquarters. Therefore, Eisenhower decided to assign a corps to the area. He then faced the problem of selecting an officer to head the largest American unit to fight the European Axis to date.

Eisenhower quickly narrowed the choice to two men close at hand, the commanders of the American invasion task forces--Maj Gen George S. Patton, in Casablanca, and Maj Gen Lloyd R. Fredendall, in Oran. Both had, at least, some experience in corps commands and in actual combat against the Germans. Patton, fifty-six years of age, had served in the cavalry after graduating from West Point. After his service in World War I he had transferred to the armored force. He played a large part in the great pre-war (1941) Carolina and Louisiana maneuvers and at the time of his selection for TORCH commanded the I Armored Corps at the Desert Training Center. It was during Patton's tenure there that Devers and others had become dissatisfied with the AAF support given to the training. From one of the wealthiest families in California and a thoughtful, extremely well read student of his profession, Patton was a man of extraordinary strengths and failings. Perhaps the finest American combat ground commander of World War II, he was also a supreme egomaniac, a mystic, and subject to violent emotion. He was a great actor and not above throwing tantrums or kisses to get his way. At this stage of the war his eccentricities, such as rabid Anglophobia, seemed to out weigh his potential. Eisenhower picked Fredendall instead.[41]

[40] Butcher, *Three Years with Eisenhower*, pp 229-230.

[41] Patton has been the subject of numerous biographies. One of the most illuminating publications on his military thought and actions is Martin Blumenson, *The Patton Papers* (Boston: Houghton Mifflin Co., 1972-74), in two volumes. These volumes are mostly in Patton's own words and they admirably reveal his military actions and philosophy. For the General's personal side see, Ladislas Farago, *Patton Ordeal and Triumph* (New York, N.Y.: Ivan Obolensky, Inc., 1963) and Martin Blumenson, *Patton: The Man Behind the Legend 1885-1945* (New York, N.Y.: William Morrow and Company, Inc., 1985.)

Maj Gen Lloyd Ralston Fredendall, at age 58, had done well in the Army, despite his failure to complete West Point. His specialty was training and he had previously commanded the II Corps before it went overseas. Marshall had recommended him for TORCH and Eisenhower had asked for him. He, like Patton, was senior to Eisenhower in service, but that never seemed to have been a serious problem. It was during his earlier command of II Corps, in May 1942, that the AAF had botched a large-scale air-ground exercise at Fort Benning. The short, stocky Fredendall projected a loud and gruff image every bit as rough as Patton's. He had outspoken opinions and did not hesitate to criticize either his superiors or his subordinates. He formed judgments rapidly, often with insufficient (or inaccurate) information, but was impatient with the recommendations of his subordinates. He had the habit of issuing bombastic, colorful, but imprecise messages. At a key point in the Kasserine engagements he told a subordinate "I want you to go to Kasserine right away and pull a Stonewall Jackson. Take over up there." Although he did not lack personal courage, Fredendall ensconced himself in an elaborate dug-in headquarters establishment far behind the front, which he seldom left. It amazed and disgusted almost all outside observers.[42] Soon after taking over on January 1, he developed extremely bad relations with Maj Gen Orlando P. Ward, the commander of his principal combat unit, the 1st Armored Division. Soon he ignored Ward to deal directly with one of Ward's subordinates, Brig Gen P.M. Robinett. Nor did Fredendall have any affection for the French or the British. He particularly disliked General Anderson.[43]

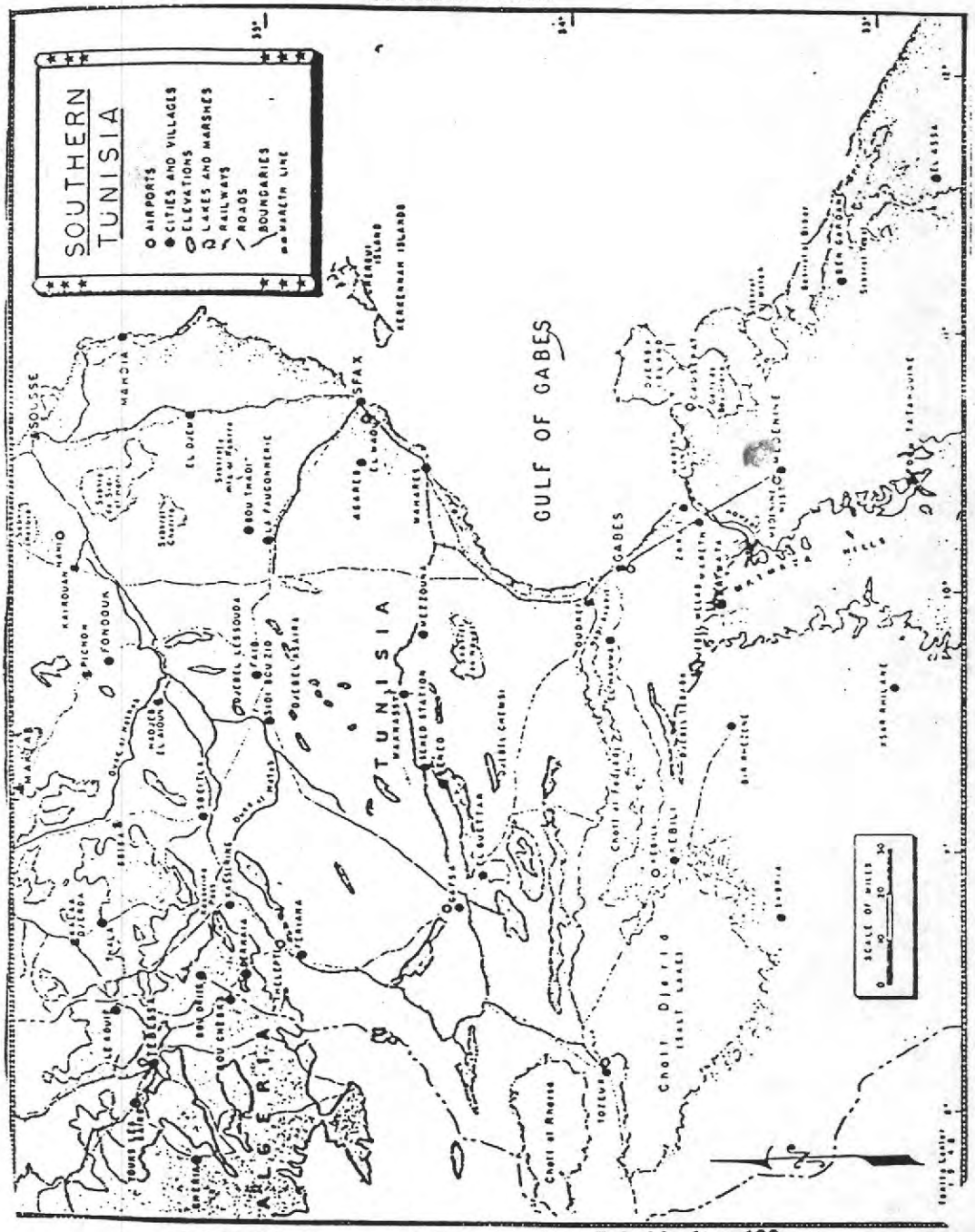
Given Fredendall's failure in battle seven weeks later and his replacement by Patton, Eisenhower certainly misjudged Fredendall. On December 10, he rated Fredendall behind Patton remarking, "Patton I think comes closest to meeting every requirement made on a commander. Just after him I would rate Fredendall, although I do not believe the latter has the imagination in foreseeing and preparing for possible jobs of the future that Patton possesses."[44] On February 4 Eisenhower recommended promotions to lieutenant general for both Patton and Fredendall. The previous day he had assured General Marshall that he had "now eliminated from my mind all doubts I had

[42] Howe, *Northwest Africa*, p 447.

[43] L[ucian] K. Truscott, *Command Missions: A Personal Story* (New York, NY: E.P. Dutton and Company, Inc., 1954), pp 144-145. In contrast to Patton, almost nothing exists on Fredendall's character or personality. Truscott, who served as Eisenhower's representative at the front, had ample opportunity to observe Fredendall for his entire tour as Commander of II Corps and to form a first hand opinion.

[44] Chandler, *Eisenhower's Papers*, II, Notes for Commander Butcher, 10 December 1942, item # 705, p 824.

Map 4:
Southern Tunisia



SOURCE: Craven and Cate, *Torch to Pointblank*, p 133.

as to Fredendall."[45] Yet, also on February 4, Eisenhower sent a message to Fredendall referring to Fredendall's past criticism of the British, "the habit of some of our generals in staying too close to their command posts," and the lack of road discipline in Fredendall's command, which caused extensive traffic jams and offered tempting targets to Axis aircraft.[46] The letter contained a curious mix of compliment and complaint. It indicated Eisenhower may not have rid himself of doubts after all.

Somewhat unexpectedly, Fredendall had no problems getting along with the successive commanding officers of the XIIth Air Support Command (XII ASC), the Twelfth Air Force unit charged with II Corps air support. Since he did not move his headquarters, the commanders of the XII ASC, who had co-located their headquarters with Fredendall's, had no problems in maintaining contact with him or in setting up semi-permanent communications facilities with their subordinate air units. Nor, despite his refusal to help the French, did Fredendall interfere unduly with the operations of the XII ASC. Col Paul L. Williams, who led the XII ASC from late January to the end of the campaign, noted in an official report, "General FREDENDALL and General PATTON both stated in substance, 'Don't wait for us to order air missions, you know what the situation is, just keep pounding them.'"[47]

The lack of air-ground teamwork between II Corps and XII ASC stemmed more from failures on the part of the XII ASC than II Corps. Repeated, frequent changes of command, assignments, and stations robbed the XII ASC of the continuity of training and cooperation with familiar ground units necessary for ground support work. Doolittle had hastily formed the XII ASC, under the command of Brig Gen John K. Cannon, even later than the rest of the Twelfth when the Casablanca invasion was added to TORCH. Once ashore in Casablanca, over 1,000 miles from Tunis, the XII ASC trained with Lt Gen Clark's Fifth Army. When II Corps entered Tunisia, the XII ASC split in two, part going with II Corps and a small part, XII ASC Detachment, staying with Clark. Cannon took over XII Bomber Command, and Brig Gen Howard A. Craig left Spaatz's Headquarters to take XII ASC. This would seem an inspired choice because Craig had just received the tablets from Coningham. Craig, however, failed to gain Doolittle's confidence. In the midst of the German counter-attack of

[45] *Ibid.*, II, footnote 5, p 938.

[46] *Ibid.*, II, Message Eisenhower to Fredendall, 4 February 1943, item # 808, pp 939-941.

[47] XII ASC Report of Operations, 9 April 1943, p 23, Record Group 337, Army Ground Forces, file No. 319.1/83, Box 245, National Archives and Records Administration, National Archives Modern Military Division, Washington D.C.

January 18-25 (described below), Doolittle wrote to Spaatz that although Craig was a brilliant staff officer, and one of the AAF's exceptional planners and organizers, his present job did not suit his capacities. Doolittle suggested that Craig move to the XII ASC Detachment with Clark and that Col Paul L. Williams replace him. Of Williams Doolittle said, "Williams is better suited as a result of experience and temperament to command and lead combat units in support of ground troops in an extremely active forward area."[48] The next day, January 21, Spaatz sent Williams to the XII ASC, noting that Craig would become Tedder's chief of staff in the coming Casablanca dictated air reorganization.[49] XII ASC now had its third commander in three weeks, two of whom had had no chance to become acquainted with its personnel, its condition, and the troops and ground commander it supported. This switch occurred at the exact moment of a German counter-attack directed at the French XIX Corps and contributed to the Allies' disjointed air response.

Beyond its unfamiliar leaders the XII ASC suffered under many operational handicaps. The rainy season limited operations and turned the airfields to mud. The airfields themselves were too distant from the front lines and meagerly equipped. Insufficient logistics and lack of experience have already been cited. They all contributed to a very low operational ready rate, subtracting even more planes from the command's order of battle. The XII ASC had two further problems. It lacked radar coverage of its front. This cut down its warning and reaction times to German air operations, forcing it to rely on chance sweeps to catch German aircraft aloft or on their fields. The Germans, who had complete radar coverage, avoided these sweeps. Their dive bombers would merely land for 5 minutes or so until the Allied air sweep passed and then resume their deadly work. Secondly, by mid-January the command had already fought several of its units to exhaustion. Doolittle reported to Spaatz that the Twelfth's entire striking force consisted of 9 groups with a total of 270 planes---only 48% of their full strength.[50] Doolittle's figures included the Twelfth's heavy bombers. The XII ASC operations report showed only 26 P-40s, 19 P-39s, and 38 A-20s operational on January 13--numbers that rose to 52 P-40s, 23 P-39s, 27 A-20s and 8 DB-7s by

[48] Ltr, Doolittle to Air C-in-C, Allied Air Forces (Spaatz), 20 January 1943, Papers of James H. Doolittle, Manuscript Division, U.S. Library of Congress, Box 19.

[49] Command Diary Entry, 21 January 1943, Spaatz Papers, Diary. Craig had also developed a raging case of pneumonia that put him flat on his back, making his replacement inevitable. The change of assignment certainly did Craig's career no harm he continued to receive excellent staff assignments and retired a three star general.

[50] Ltr, Doolittle to Spaatz, 23 January 1943, Doolittle Papers, Box 19.

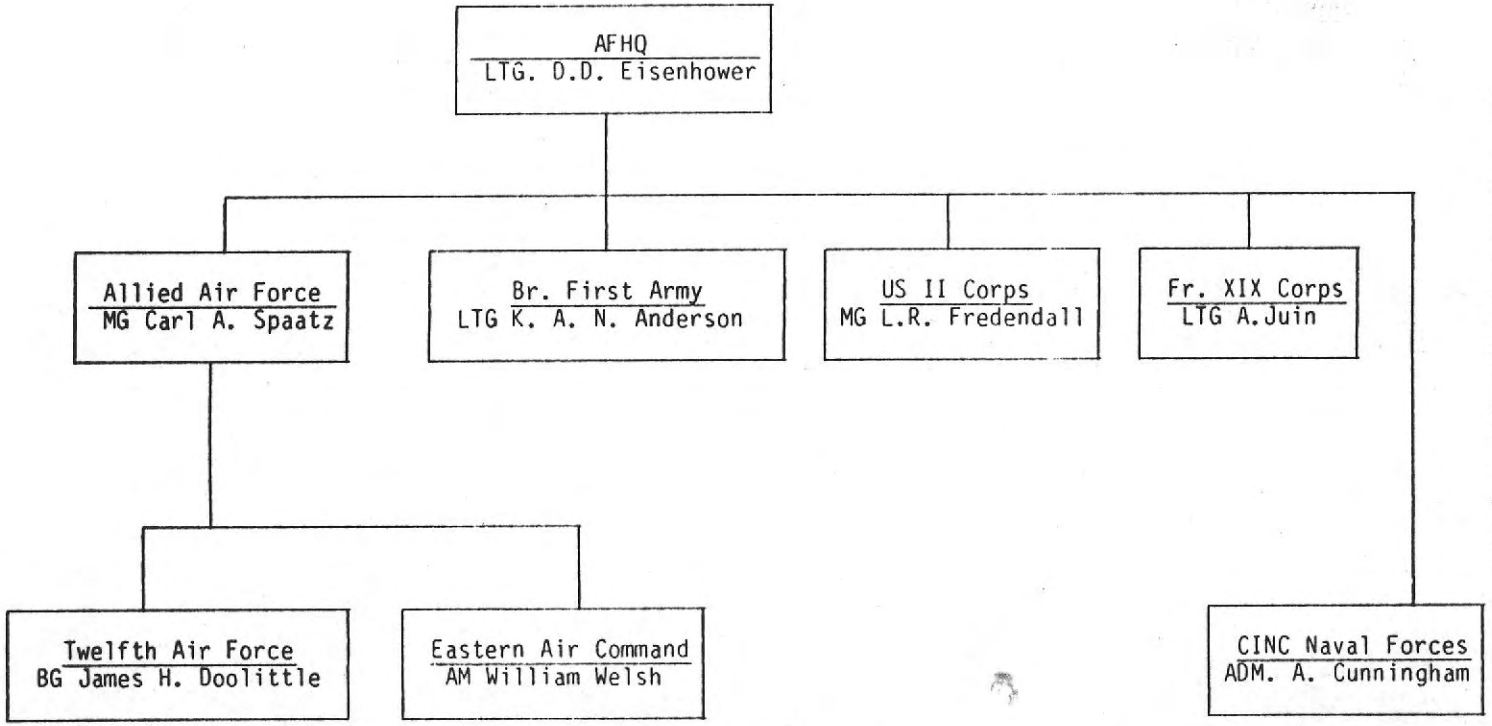


Chart 1:
Allied Chain of Command, January 6, 1943

January 26.[51] Under the above circumstances the chances of II Corps and XII ASC forming an effective air-ground team in a few weeks were nil.

The British half of Spaatz's Allied Air Force suffered from many of the same problems. Personalities, however, played an even greater role in disrupting its operations. Lt Gen Kenneth A.N. Anderson simply never understood air operations. His wartime experience militated against such an understanding. During the fall of France he had served as a brigade commander in the British Expeditionary Force. Shortly before Dunkirk he took over a decimated division and for the next two and one half years he trained troops in England. His only memories of air were searing ones of the overwhelming ground support effort of the *Lüftwaffe* and the inadequate response of the RAF. His first experiences in North Africa confirmed these memories as his supply ships went down at Bougie, his forward lines were dive bombed incessantly, and the *Lüftwaffe* maintained air superiority over his front. Understandably, this tended to make him defensive-minded as far as air was concerned.

Nor did Anderson's personality facilitate cooperation. He was an unusually reserved and reticent Scot, stubborn in his opinions and congenitally pessimistic in his assessments of military operations.[52] During the preparations for TORCH these qualities on occasion manifested themselves. He clashed with the British Navy over use of landing craft. His American subordinate for the Algiers invasion, Maj Gen Charles W. Ryder, was warned upon his assignment to get along with Anderson "no matter how difficult it may be."[53] Anderson's chief of staff, Brigadier C.V.O'N. McNabb, had all of Anderson's poor qualities, in spades. He was reticent to the point of secretiveness, and few Americans could approach him, let alone come to know him.[54]

Anderson's relations with the RAF commanders proved particularly acrimonious. RAF semi-official histories admit that Air Marshal William Welsh's and Anderson's mutual antipathy took precedence over the conduct of their duties.[55] Arrangements between EAC and 1st Army broke down almost from the moment they landed. The

[51] Rpt. CG XII ASC (Williams) to CG, NATO (Eisenhower), subject: "Report of Operations," 9 April 1943, p 3, National Archives, RG 337, Army Ground Forces Central Decimal File, 319.1/83, Box 245.

[52] Truscott, *Command Missions*, p 144.

[53] Harry Butcher, "Manuscript of Butcher Diary," p 168, 197, Eisenhower Presidential Library, Abilene, Kansas. This is the complete draft of the published Butcher Diary and contains many passages deleted from the published version because of security or personal embarrassment considerations.

[54] Truscott, *Command Missions*, p 144.

[55] RAF Narrative, "North Africa," pp 204-205.

original plans called for Anderson and Welsh to arrange air support together. But the two men soon went their separate ways as Welsh stayed in Algiers to supervise air defense and convoy protection while Anderson moved forward to a spartan headquarters, deficient in signal organization, but close to the front. Welsh's failure to follow disappointed Anderson. Instead Air Commodore G.M. Lawson, with a small RAF command post, moved forward with Anderson and attempted to meet his air support demands. Further forward, EAC had a wing commander with the 78th Division and with 5th Corps, which took over the British front at the end of November. Both men had insufficient rank for their task of cooperating with Army opposite numbers who outranked them by at least two grades. The formation of 242 Group, a headquarters unit commanding all British aircraft assigned to the support of the 1st Army, its placement under Lawson's command, and its co-location with 5th Corps improved the system slightly. Nor did EAC bother to maintain close liaison with 242 Group. Consumed by his other duties, Welsh made few planes available to 242 Group and when Lawson ordered his fighter squadrons out on ground strafing missions, Welsh stopped him. By January 4, 1943 Lawson had only a handful of fighter bombers available to him.[56]

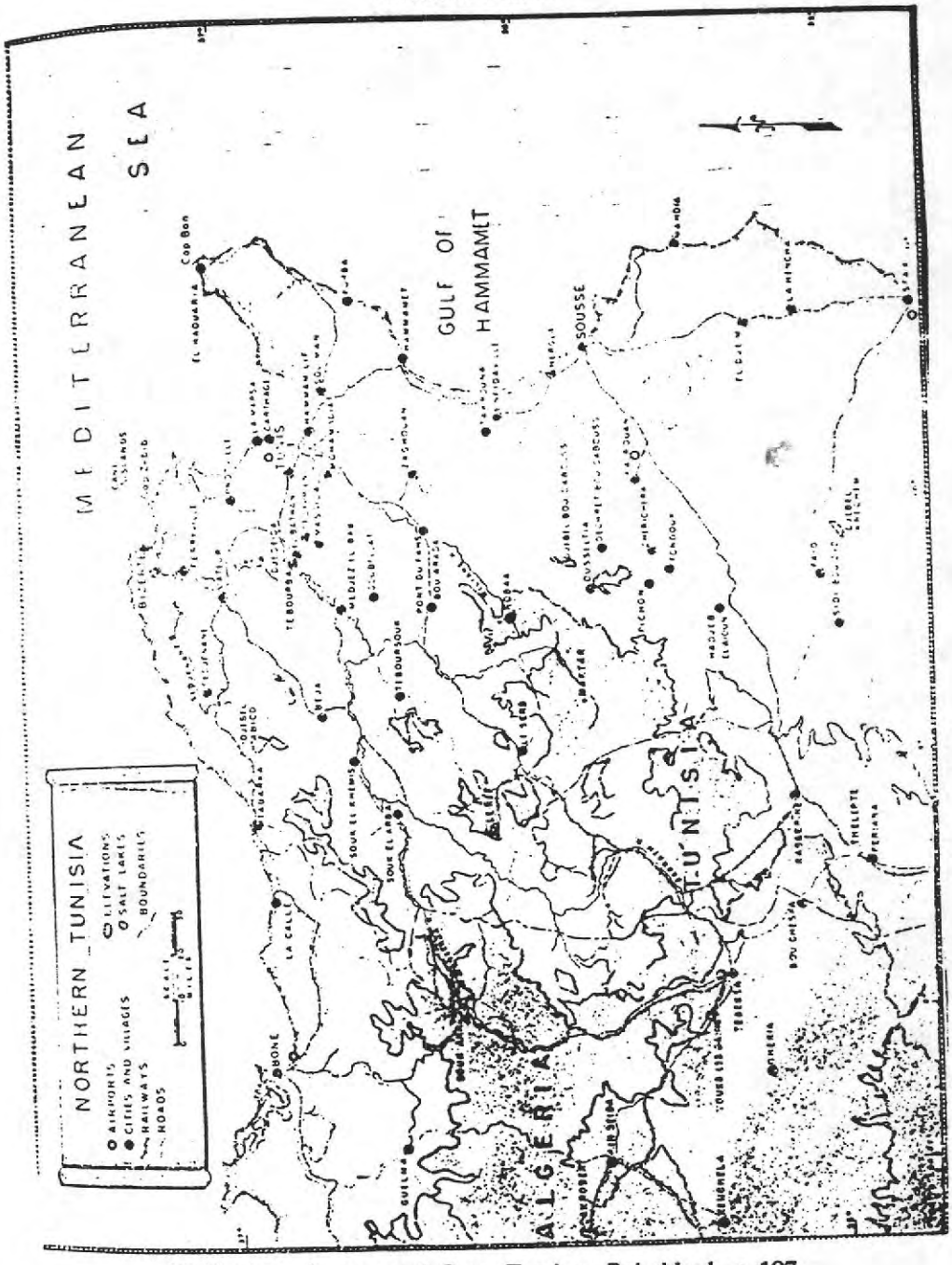
Neither the Americans nor the British had a fully functioning air-ground support team. By the middle of February this lack of air-ground cohesiveness would hamper the Allied response to the German counterattack at Kasserine Pass.

As II Corps came into the line, during the first two weeks of January, the Allies planned to use it for a drive to the coast to separate the Axis forces in Tunisia from Rommel's retreating forces. Fredendall made preparations for that attack until mid-January when logistical difficulties and a more rapid approach of Rommel than anticipated led Eisenhower to order him to assume a defensive stance. From January 18-25 a counter-attack by the Axis forces in Tunisia on the center of the Allied line gained important mountain passes and alarmed the Allies before it was contained. Allied tactical air flew several useful missions in the course of this assault.[57] A few days later, from January 30-February 3, the sparring between the Allied and Axis forces shifted to the south. Once again the Axis gained key passes from the French, especially the Faid Pass, which could serve as a jumping off point for attacks on II Corps' main supply depot at Tebessa and the airfields at Thelepte. Sandy soil conditions, which promoted excellent drainage, allowed Thelepte to operate in all weather conditions, a crucial factor in Tunisian air

[56] Playfair, *The Destruction of Axis Forces in Africa*, pp 308-309.

[57] Howe, *Northwest Africa*, pp 379, 381.

Map 5:
Northern Tunisia



SOURCE: Craven and Cate, *Torch to Pointblank*, p 197.

operations. Axis dive-bombing attacks harassed the Americans particularly during an unsuccessful American attack on the village of Maknassey. That attack, on January 31, 1943, struck an infantry battalion aboard a truck convoy jammed nose to tail causing substantial casualties.[58]

The Allies remained on the defensive at the beginning of February as Rommel's forces joined their comrades in Tunisia and prepared to take the offensive before Montgomery's British Eighth Army could come to the assistance of Eisenhower's forces. On February 14 and 15 the Germans broke out of the Faid Pass, seized the important crossroad at Sidi Bou Zid, and continued forward, capturing several positions, including Thelepte, by February 17. On February 20, under the eyes of Rommel himself, Axis forces stormed the Kasserine Pass, badly damaging several units of the American 1st Armored Division. At that point Allied defenses stiffened. The Axis, concerned about the approach of Montgomery, and their own lack of supplies, began to withdraw from Kasserine Pass on the afternoon of February 22. They were pursued only hesitantly by the Allied ground forces, who reoccupied the entire pass by February 24. This ended the largest Axis attack of the campaign, giving them a tactical victory, but producing no strategic effect. The Allies soon replaced their heavy losses in men and material.

The summary of ground operations above gives only an outline of the campaign's events in the winter of 1942-1943. The activities both of Spaatz and of Allied air-ground operations during the period will be the subject of the following pages.

Before the decisions taken at Casablanca could take effect, the German counterattack, of January 18-25, struck the boundary between the British and French forces in Tunisia, forcing them to give ground and, in the process, revealing serious deficiencies in overall coordination between the different Allied forces. In one instance, the XIIth Air Support Command, acting under Fredendall's orders, refused to send planes over an area for which the RAF 242 Group had responsibility.[59]

Spaatz, inspecting facilities in Marrakesh, returned to Eisenhower's Headquarters (AFHQ), in Algiers, on January 21. There he participated in an emergency conference on the German attack on the French, during which he informed Eisenhower of the new Casablanca mandated air arrangements.[60] The conference minutes noted, "It was evident also that collaboration by air forces was faulty to date, due

[58] *Ibid.*, p 396 and Command Diary Entry, 6 February 1943, Spaatz Papers, Diary.

[59] *Ibid.*, pp 139-140.

[60] Command Diary Entry, 21 January 1943, Spaatz Papers, Diary.

particularly to the absence of an air headquarters with executive authority as far forward as Advanced Headquarters (General Anderson's HQ in Constantine)."[61] Eisenhower remedied this faulty collaboration by directing Spaatz "to place at Advanced Headquarters immediately an officer who will be in executive control (in command of) the air forces supporting General Fredendall and General Anderson."[62] Eisenhower gave that air officer the right to secure the assistance of the Northwest African Strategic Air Force upon specific request, but required him to "receive his instructions for battle from General Anderson so far as they affect all air forces allotted to the support of the ground armies." Eisenhower had taken a large step in improving air support, but in making the air commander subordinate to the ground commander he overlooked an essential piece of the more successful British method developed under Coningham--the equality of land and air. In his own mind, at least, Eisenhower remained faithful to the strictures of FM 31-35. As late as January 15, 1943 he could write, "we have a published doctrine that has not been proved faulty."[63] On January 22, Spaatz assigned Brig Gen Laurence S. Kuter as acting chief of the Allied Air Support Command (AASC). When Coningham arrived he would relieve Kuter.

In another action resulting from the emergency conference Eisenhower charged Anderson with the task of "co-ordinating" the entire front. Three days later, January 24, Eisenhower made Anderson responsible for the employment of American forces and that evening the French commander, Gen. Alphonse Juin, agreed to place his forces under Anderson. The western Tunisian front now had one overall ground and air commander. It did not yet have an air-ground team.

At this point, Spaatz replaced Brig Gen Craig with Col Paul L. Williams, as commander of the XII Air Support Command. Williams who had specialized in attack and observation aviation before the war and commanded air support formations in the pre-war maneuvers, stayed with XII ASC until the campaign's end. Spaatz had brought him to England and then to North Africa precisely because of his experience in army co-operation. The XII ASC and 242 Group comprised the bulk of Kuter's new command.[64]

In Algiers Spaatz commenced a round of meetings which would take him to Cairo and back. On January 24 he met Arnold, who came direct from Casablanca. They decided that units in the U.K.

[61] Chandler, Memo, of Conference at Advanced Allied Air Force Headquarters, 21 January 1943, *Eisenhower's Papers*, II, item 767, p 918.

[62] *Ibid.*, p 919.

[63] *Ibid.*, Msg, Eisenhower to Russell Peter Hartle, item 770, pp 904-905.

[64] Command Diary Entries, 21 and 22, January, 1943, Spaatz Papers, Diary.

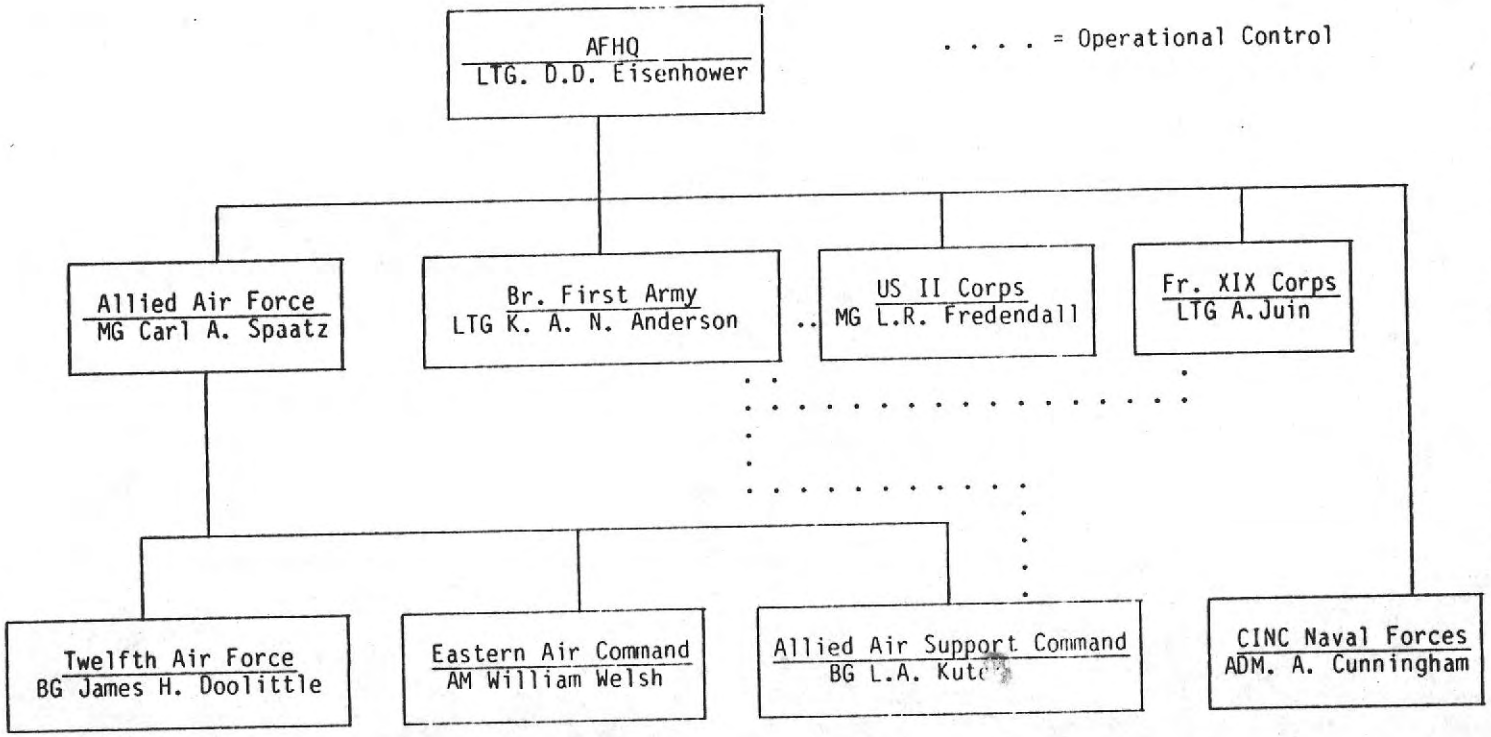


Chart 2:
Allied Chain of Command, Janauary 30, 1943

would have P-47s, which would free all England-based P-38s for deployment to Africa. Late on January 26, Spaatz left Algiers for Cairo and upon arriving the next morning he joined in three days of discussions with Tedder, Arnold, Andrews, and Maj Gen Louis H. Brereton, the Commanding General of the Ninth Air Force, to settle the details of the new Allied organization in the Mediterranean.[65] He returned again to Algiers on the January 31.

Four days later, on Thursday, February 4, and in the wake of another Axis thrust, Spaatz flew forward to Constantine. That evening he and Brig Gen Joseph Cannon called upon Maj Gen Lucian K. Truscott, Eisenhower's representative at the front, informing him of their intention to visit Fredendall's II Corps Headquarters on the next day. During their talk with Truscott, Spaatz elaborated on his own views toward the use of aviation in conjunction with ground operations: "it was a mistake to use up all of one's force in an indecisive operation; the air force should be used to hit the soft parts of the enemy and in return to protect the soft part of one's own force; and only in the event of an all-out decisive engagement was the loss of a whole force to be risked."[66]

The next day, Spaatz and his party traveled to Tebessa to meet Anderson, who had apparently come to the south to dicuss future operations with Fredendall.[67] Once again the conversation turned to air support. Brigadier McNabb, Anderson's chief of staff, referring to a local Allied counter-attack planned for the next day[68], gave the 1st Army's views. "He said that General Anderson wanted the whole air effort put on the ground positions immediately in front of our troops in the coming offensive, in as much as the ground striking force was weak in artillery. General Anderson had stated the day before that this should be the main effort of all air strength available, that this was the primary job to be done and that he was not interested in the bombing of enemy airdromes such as that at Gabes."[69] Here was an airman's *bete noire*. Anderson wanted to ignore counter-air operations to use support aircraft as artillery pieces.

After lunch the party proceeded to General Fredendall's dug-in command post where they encountered more evidence of the Allied ground commanders' parochial view point of air support. Generals Spaatz, Fredendall, Truscott, Kuter, and Colonel Williams all participated in an informal discussion. Fredendall, no doubt recalling the

[65] *Ibid.*, Command Diary Entries, 27-30 January, 1943.

[66] *Ibid.*, Command Diary Entry, 4 February, 1943.

[67] Howe, *Northwest Africa*, p 399.

[68] *Ibid.*

[69] Command Diary Entry, 5 February, 1943, Spaatz Papers, Diary.

dive-bombing of his troops in the recent attack on Maknassey, wanted full air coverage for the first two days of his attack in order to protect troops and artillery from dive-bombing attacks. "He wanted his men to see some bombs dropped on the position immediately in front of them, and if possible, some dive bombers brought down in sight of his troops." Spaatz observed that he had practically used up his medium bomber and P-40 fighter groups in air support, and the replacement rate of both pilots and machines would not allow for continued wastage on such an extravagant scale. He felt the air force's most useful function would be hitting enemy airfields, tank parks, troop convoys, and motor transport concentrations while protecting Allied soft points such as supply lines. "If he maintained a constant 'umbrella' over one small section of the front, with only shallow penetration by {his own} bombers and fighters, then his available force would be dissipated without any lasting effect." Spaatz insisted that the "hard core" of any army ought to have the ability to defend itself against dive bomber attacks. Fredendall granted the last point, but admonished that if he did not get forty-eight hours air coverage from the start, then the offensive would fail.[70] In any case Eisenhower cancelled the contemplated offensive. This left the matter of the exact nature of air cover for the land forces unresolved.

This was not the first run-in between Spaatz and Fredendall. Two and one-half weeks earlier, January 17, Spaatz had flown to Tebessa, at Doolittle's urging, to straighten out air support matters. Doolittle had passed the word that Craig, the Commander of the XII ASC, could not "adequately" handle the situation. Spaatz discovered Craig had the situation under control or would have had it under control if not for the interference of Fredendall. Among other things, Fredendall had willfully compromised the security of the highly secret radar on the night fighting Beaufighters by ordering them to patrol over Axis air space--an action contrary to agreements with the British. Spaatz went on to II Corps Headquarters to try and hammer out some sort of *modus vivendi*. Spaatz's diary laconically noted, "informed him that the arbitrary decisions made by him with reference to the use of air forces by Craig at Tebessa resulted in confusion, and recited the instances. Told him that the only logical place for the Ground Support Commander was alongside of him to prevent him from making damn fool decisions." Fredendall agreed temporarily to abide by Craig's decisions.[71]

When Spaatz returned to Algiers, on the following day, he journeyed on the same aircraft as Brig Gen Ray E. Porter, an infantry officer returning from Fredendall's staff for reassignment as the

[70] *Ibid.*

[71] *Ibid.*, Command Diary Entry, 17 January, 1943.

Assistant Chief of Staff, the Organization and Training Division, G-3, in Washington D.C. This was a key post for the approval of official War Department doctrine and Porter would later have a hand in incorporating the North African experiences into new air doctrine. Porter expressed views on air support that Spaatz must have found refreshing. He noted that the vast majority of all U.S. casualties attributable to dive bombing resulted from a single raid in which an incompetent battalion commander had brought his men forward, in daylight, in a truck convoy jammed nose to tail. Porter "further stated that after one or two dive bomber attacks, the men could take care of themselves and were no longer seriously affected in their morale." Finally, Porter echoed an opinion becoming increasingly common at the front--"He believed a defensive fear complex was being built up at 2nd Corps as evidenced by their elaborate bomb proofs for their Headquarters, which in its initial location was so well concealed as to present very little chance for a bombing attack."[72]

After three months of combat operations the top Allied ground commanders and the top Allied air commander still talked past each other, unable to agree on a satisfactory ground support method. Fredendall, backed by his interpretation of War Department doctrine, and Anderson, untutored in the air-ground experiences of the British 8th Army, wanted to use aircraft as either artillery or as an aerial defensive garrison over key points. The airmen rejected these ideas as impracticable. They wished to employ their forces to attack the enemy air force and other vulnerable areas behind the front lines. At the point of combat, the airmen reasoned the ground troops had the equipment and training to fend for themselves--infantry, armor, and artillery, in the airmen's opinion, did not constitute the "soft points" of the army. The ground commanders found this stand unacceptable. The logjam would continue until mid-February when the major German attack at Kasserine Pass and Coningham's arrival to command the Northwest African Tactical Air Force would combine to provide the opportunity for the beginnings of a solution.

Reorganization and Kasserine Pass

Spaatz remained hard at work on the reorganization until its implementation. As he wrote to Arnold on February 8, he hoped to

[72] *Ibid.*, Command Diary Entry, 6 February 1943. In addition see Eisenhower, *Crusade in Europe*, p 141. "It was the only time during the war, that I ever saw a divisional or higher headquarters so concerned over its own safety that it dug itself underground shelters."

have the first stage in place in a few days. His staff had already cut the orders and they only needed Tedder's return from London to issue them.[73] To Chief of the Air Staff, Maj Gen Stratemeyer, Spaatz confided, "the most serious difficulty which I see confronting us is the different conception which obtains in the RAF and in our own War Department as to the place of aviation. It is difficult to have aviation treated as a co-equal with the Army and Navy in our set up, whereas the RAF will not submit to being considered in any other way." Anticipating trouble Spaatz observed, "a number of instances have developed indicating that the Ground general considers his air support as a fundamental part of his forces, even to the point of dictating as to how to do the job. Such employment, I am afraid, will not be accepted by the RAF." Spaatz predicted, "with Coningham, a full-fledged veteran of the Battle of the Mediterranean with all of his prestige behind it, at the head of our Air Support command, it can readily be seen that something is bound to break out in a very short period."[74]

Tedder and Coningham returned from London on February 14, the same day the Germans launched their greatest attack of the campaign. In the midst of this series of engagements, which included the sanguinary American defeat at the Kasserine Pass, the Allies instituted the command changes agreed upon at Casablanca; Fleet Admiral Sir Andrew Cunningham became Naval Commander-in-Chief Mediterranean; General Sir Harold L. Alexander became Deputy Commander-in-Chief of the Allied Force and head of the 18th Army Group, comprising the British 1st and 8th Armies, the French XIX Corps, and the American II Corps; Tedder became head of the Mediterranean Air Command (MAC).

MAC Headquarters consisted of a small policy and planning staff, "'a brain trust without executive authority or domestic responsibilities.'"[75] In the North African Theater, MAC's operations came under AFHQ's control. There MAC operated through its own subordinate command, the Northwest African Air Forces (NAAF), under the command of Spaatz. NAAF commenced operations on February 18, when the Allied Air Force disbanded. The U.S. Twelfth Air Force and British Eastern Air Command, soon joined by the Anglo-American Western Desert Air Force (February 21), made up NAAF's major sub-elements. Spaatz's own headquarters transferred virtually intact from the Allied Air Force. He set up an operational headquarters in Constantine, near Doolittle's and Coningham's headquarters, and left

[73] *Ibid.*, Ltr, Spaatz to Arnold, 8 February 1943.

[74] *Ibid.*, Ltr, Spaatz to Stratemeyer, 8 February, 1943.

[75] Craven and Cate, *Torch to Pointblank*, p 161, citing manuscript by S/Ldr J. N. White, "Evolution of Air Command in the Mediterranean", 13 November 1944.

an administrative section in Algiers. Throughout the NAAF and its subordinate air forces, AAF and RAF personnel occupied alternating command and staff positions down to, but not including, the individual combat unit level. This interleaving greatly expanded the practice of combined Anglo-American headquarters that the Allies had begun with the establishment of AFHQ prior to the North African invasion.[76]

The concept of dedicating entire air forces to separate yet cooperating tactical or strategic roles became the AAF standard operating procedure throughout the European and Mediterranean Theaters of Operations. In the case of NAAF, however, one should note that the designation "Strategic" was something of a misnomer in that the Strategic Air Force did not attack strategic industrial targets, but confined itself to what one could call grand tactical targets, enemy lines of supply and logistical support.

NAAF also absorbed the British air co-operation doctrines conceived by Woodall and employed by Coningham. Allied ground leaders would henceforth grudgingly concede the principle that a single airman must command all the air forces committed to the ground battle, because aircraft, unlike the other combat arms, had free rein over the combat zone and should deploy in overwhelming force at the decisive points rather than fritter away their strength in penny-packet formations at the ground commander's whim.

The practice of creating a combined Allied staff carried to the lowest feasible level served as a template for the organization of the Allied Expeditionary Force, which later conducted the cross-channel invasion into France. This close association with the RAF had an important side benefit for the AAF. The AAF managed to cloak itself with the RAF's independent status, thus freeing itself from some of the more irksome restrictions inherent in its role as a subordinate part of the U.S. Army. Spaatz, for example, participated in Allied command conferences as an equal to his ground and naval opposite numbers rather than as an air advisor to the American ground force commander.

The reorganization also embraced the logistical support of Allied air power in North Africa. Brig Gen John Cannon became the head of the Northwest African Training Command, and Brig Gen Delmer Dunton formed the Northwest African Air Service Command from the XII Air Service Command and the maintenance organization of the Eastern Air Command.[77]

In one of their first actions after establishing NAAF, Spaatz and Tedder met Eisenhower on February 17 and gained his agreement, "that air support should function very much along the princi-

[76] *Ibid.*, pp 161-165.

[77] *Ibid.*, p 163.

ples previously in operation with 8th Army and Alexander. It was understood that this means in general that the decision and needs of the ground army are of paramount importance, and that the element of decision as to type of operation must rest with the Army commander." Eisenhower, however, allowed the air commander to determine all matters of technique and forces employed.[78] This concession by Eisenhower gave XII ASC more operational flexibility.

Coningham's arrival at 18th Army Group Headquarters on the same day allowed Allied air power to widen this initial and significant concession by Eisenhower. Upon his assumption of command on February 23, the New Zealander promptly put the Northwest African Tactical Air Force into operation according to his own principles. The flying of defensive umbrellas over ground formations would cease at once. All future missions would be offensive and would be conducted as aggressively as possible. Furthermore, the prime target would be un-armored motor transport and troops, no more concentration on "tank-busting."[79] These directions, however, did not come into force until March 2, after the Kasserine fighting had ended.[80] The co-location of Coningham's headquarters with General Alexander's ended Lt Gen Anderson's *de facto* control of tactical air.

General Alexander's assumption of the command of the 18th Army Group also proved beneficial. Alexander, the British Army Commander-in-Chief Mediterranean and Eisenhower's Deputy in charge of land forces, had served as Montgomery's and Coningham's commanding officer in the El Alamein campaign. He, too, had absorbed the new methods of air support, and his acceptance of them greatly eased the heretofore strained relations between the ground and air forces. Spaatz's diary noted with satisfaction, on February 23: "General Alexander supports the Air Force fully in their objection to the air umbrella rather than air offensive operations. This is a complete reversal of the previous attitude of the Army under Anderson and Fredendall."[81]

The arrival of Coningham, the centralization of control of tactical air under him, and his co-location with Alexander solved the personality problems of the old EAC, which went out of existence upon Coningham's assumption of command. It removed Anderson, and the dead hand of his defensive attitude, from his position in charge of allocation of tactical air. As for Welsh and Lawson, they were replaced and sent elsewhere. Welsh spent the rest of the war exiled to America as head of the RAF Delegation. When Spaatz had taken over

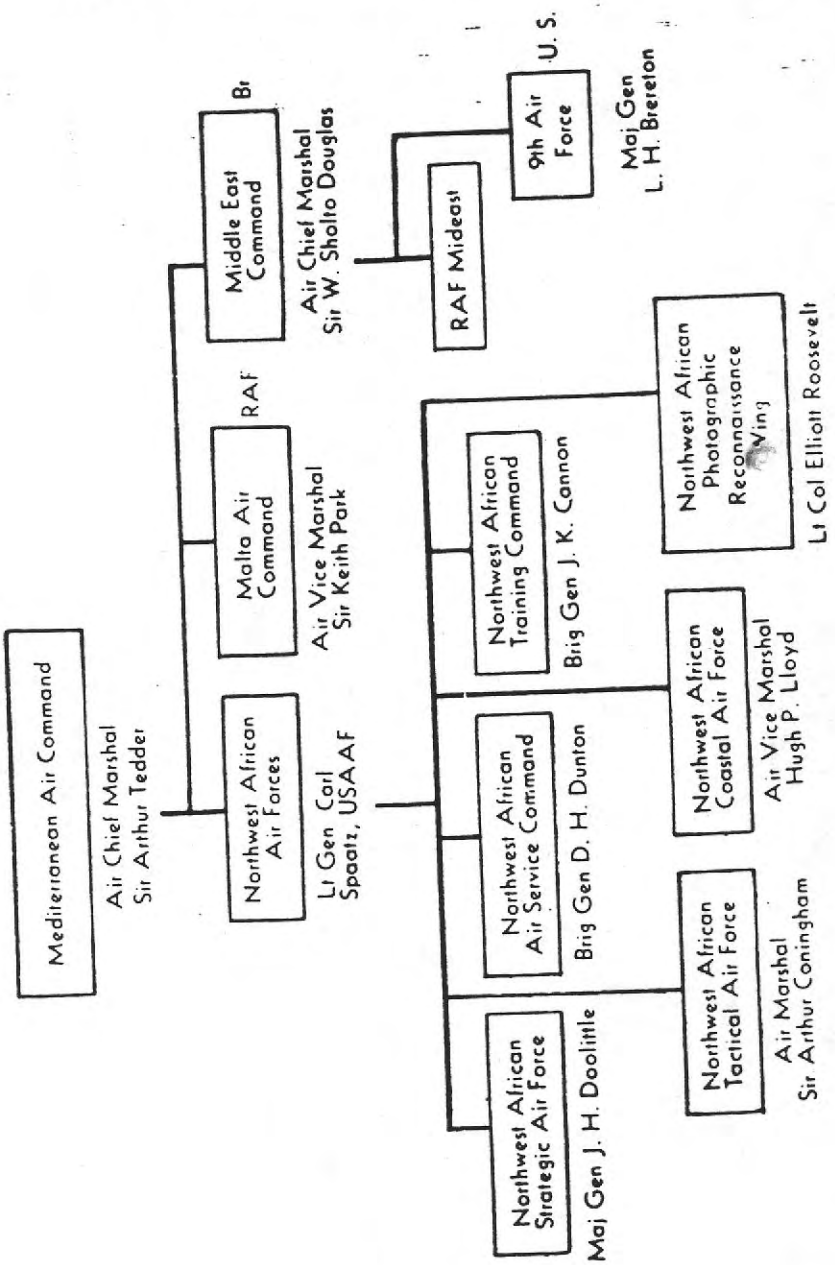
[78] Command Diary Entry, 17 February 1943, Spaatz Papers, Diary.

[79] Craven and Cate, *Torch to Pointblank*, p 157.

[80] Playfair, *The Destruction of Axis Forces in Africa*, p 311.

[81] Command Diary Entry, 23 February 1943, Spaatz Papers Diary.

Chart 3:
Organization Chart of Allied Air Power, February 18. 1943



SOURCE: Howe, *Northwest Africa*, p 486.

the Allied Air Force in the beginning of January he had recognized the pair's inability to cope with Anderson. Since he controlled them, and not Anderson, he had recommended their replacement then and there. Portal, who apparently assumed Spaatz wished to dispose of Welsh because Welsh outranked him, objected to American interference in internal RAF matters.[82] This reprieved Welsh and Lawson for six weeks. By that time Tedder had presumedly let Portal in on the true state of affairs.

The advent of the experienced Alexander-Coningham air-ground team, no matter how effective in the long run, could not change the situation in a day. Allied tactical air did not make its presence felt during the Kasserine engagements until after the Germans had begun their voluntary withdrawal. On the first day of the offensive, February 14, the XII ASC mounted 391 sorties as opposed to 360-375 German sorties.[83] The Germans were more effective but the large number of American sorties gave a hint that the balance might soon tip in their favor. By February 16 the XII ASC reported a total operational strength of 76 Spitfires, 27 P-39s , and 24 A-20s. The 33rd Fighter Group and its P-40s had withdrawn to refit on February 9. The Spitfires of both the 31st Fighter Group and 2/3rds of the 52nd Fighter Group replaced it.[84] Both air forces maintained their effort through February 16, but bad weather on the 17th through the 21st hampered the Allied air. Calamity occurred on February 18 when the enemy advance forced the XII ASC to evacuate its forward fields at Thelepte, requiring it to destroy 34 unserviceable planes and 50,000 gallons of aviation fuel. In two days the Americans had lost 42 planes. The clouds and rain finally cleared on February 22 when the XII ASC, disorganized by its retreat from Thelepte and operating from one over-crowded field (Youks-Les-Bains) with only a single steel plank runway, flew 304 sorties, but lost 11 planes.

The evening of February 22, the Germans began their retreat and for the next few days British and American aircraft punished their retiring columns with increasing effect. Rommel later recorded, "The bad weather now ended and from midday (February 23) onward we were subjected to hammer-blow air attacks by the U.S. air force in the Feriana-Kasserine area, of weight and concentration hardly sur-

[82] Entries from "Casablanca Notes," 4 and 5 January 1943, Spaatz Papers, Subject File, 1929-1945.

[83] Playfair, *The Destruction of the Axis Forces in Africa*, p 291.

[84] XII ASC, "Operations Report," 9 April 1943, p 6, NA, RG 337, AGF Decimal File 319.1/83, Box 245.

passed by those we had suffered at Alamein."[85] During the critical period of February 20-24, Coningham had also had the strategic bombers placed at his disposal. Instead of complaining of delays imposed by enemy air, ground leaders began to note improvement. On February 25, Eisenhower observed, "The Air Force is now better organized, is well sorted out and operating efficiently."[86]

In January and February 1943 Allied ground and air leaders sought to answer the question of who should have ultimate control of the theater's limited air assets. At a later time in the war such a question would not have arisen because the overwhelming number of aircraft then available to the Allies made it possible to supply simultaneously the need of the ground commanders for battle-line support and the need of the air commanders for counter-air and supply-line strikes. The Casablanca Conference imposed an air command structure on the theater that supplied an air chain of command separate from the ground forces. This formal structure, however, would have meant little if Eisenhower had continued to allow his ground commanders the privilege of setting air priorities. He who sets priorities controls the allocation of resources. Spaatz, alone in January, with Tedder's help in February, convinced Eisenhower to allow air a greater voice in the control of its own forces. Eisenhower probably assented in part because he had lost confidence in his American ground force commander, Fredendall, whom Eisenhower relieved on March 6.

Once air could determine its own priorities, the Casablanca reorganization became decisive because it provided an efficient means to control the available air power. It was not only Coningham's experience, but his ability to call in all the Allied power needed (an ability denied his predecessors) that allowed him to contest the air over the Kasserine Pass and to heavily attack the retreating German columns. In the next eleven weeks, air's ability to coordinate all its resources on the key points would prove important to Allied success.

[85] *Ibid.*, p 302. Playfair has the best account of air actions during the period, better than either American Official History. For a good popular account of the action see Martin Blumenson, *Kasserine Pass* (Boston, Mass.: Houghton Mifflin Company, 1967).

[86] Chandler, *Eisenhower's Papers*, II, Memo,, 25 February, 1943, item 843, p 992.

Chapter III

The Collapse of the Axis Bridgehead (February - May 1943)

> So far as I know, Spaatz and I see eye to eye on every single thing that comes up; and we believe that we have learned lots of things that were, before the war either not understood, or not fully appreciated, either by our Ground Forces or our Air Forces.[1]
>
> Eisenhower to Arnold, May 2, 1943.

The reorganization which produced NAAF and introduced the new air support team and procedures increased the efficiency of Allied air power by serving as a catalyst which enabled the disparate air elements present in North Africa to redirect their efforts to the task at hand---defeating the enemy. The improvement of the logistics situation proved an equal factor in advancing Allied air fortunes. This amelioration, occurring at approximately the same time as the reorganization, had a synergistic effect on the entire air effort. A last, and not insignificant, factor in the improvement of Allied air fortunes was the end of the rainy season in mid-April, which allowed the Allies to greatly increase their rate of operations from their forward fields. At the same time increas-

[1] Chandler, *Eisenhower's Papers*, II, item 962 Ltr, Eisenhower to Arnold, 2 May 1943, p 1107.

ingly effective Allied interdiction of Axis supply forced the *Lüftwaffe* in North Africa to cut back its operations. All the factors which had heretofore favored the Axis air effort no longer weighed heavily in the scales, while Allied air had overcome the obstacles in its path. Carl Spaatz spent his energies in late winter and spring 1943 reinforcing and employing the new strength derived from the final restructuring, from the exploitation of fresh doctrine, and from improvement of overall logistics. He nurtured the new organizational arrangements, won over recalcitrant air and ground commanders to the new theories, and attempted to perfect the procurement, maintenance, and transportation of his men, material, and facilities.

In the aftermath of Kasserine, the Allies refitted and prepared for the offensive which would drive the Axis into the sea. On March 1, in addition to his post as Commander of the Northwest African Air Forces, Spaatz became Commanding General of the Twelfth Air Force. This did not add to his duties, since the Twelfth had virtually ceased to exist except on paper, but it did regularize his position in the formal War Department hierarchy. Spaatz also worked to increase the proficiency of NAAF.

Signal intelligence showed that over 80 percent of the Axis supplies (49,600 tons) dispatched to North Africa in February arrived safely.[2] This meant NAAF had to improve its anti-shipping effort, which depended on the Strategic Air Force. On March 1, Spaatz, Tedder, and Doolittle inspected the Telergma area airfields assigned to the Strategic Air Force. Spaatz wanted the flow of "all intelligence data" and results of all photo reconnaissance, including Malta flights, promptly sent to Doolittle's command. Evidently, Spaatz wanted to ensure that Doolittle got a full and timely share of ULTRA intercepts. Photo reconnaissance served as a cover for ULTRA, in that standard procedure called for an air sighting of targets identified by ULTRA. This not only verified the intercept, but hid the actual source of the intelligence. Spaatz also wanted the lateral communication links with the Tactical and Coastal Air Forces strengthened, as well as a radio intercept station at Strategic Air Force HQ to intercept spotting reports from Malta and Coastal Air Force reconnaissance aircraft.[3]

From the Strategic Air Force fields around Telergma, Spaatz moved forward to the Tactical Air Force airdromes around Bone in the North and Youks-Les-Bains in the South. These visits played up the importance of one of the technological components of the new air support doctrine, the need for radar coverage of the battlefield and beyond. Radar coverage allowed the air support commander to form a quick and accurate picture of the position of his own and of the enemy's frontal

[2] Hinsley, *British Intelligence*, II, p 607.

[3] Command Diary Entry, 1 March, 1943, Spaatz Papers, Diary.

aviation. Complete coverage enabled the air commander to divert or abort tactical bomber and reconnaissance flights from enemy fighters while, at the same time, making it possible to use friendly fighters either defensively to break up incoming enemy air attacks or offensively to strike enemy aircraft on or over their airfields. All this made centralization of control of air support forces not only necessary, but easier and more effective.

In the initial rush from Algiers to Tunisia and in the subsequent hurry to send forward the greatest numbers of aircraft, the Allies had neglected to send forward radar. Spaatz, who had seen its effectiveness in the Battle of Britain, moved to get GCI (ground control intercept) and early warning radar sets deployed as rapidly and as far forward as possible. He stressed in his diary the importance and urgency of radar coverage at the front in obtaining effective use of fighters on both the defensive and the offensive. Spaatz noted, "the nearer the RDF (radio direction finding or radar) coverage can read the enemy airdrome areas and check them up on take off the more effective our operations will be. This makes the location of sites for RDF stations of almost as great importance as the terrain for airdromes as an objective for the ground forces." He added, "this necessity has been lost on our buildup of units, and must be emphasized in order that our Air Forces can be properly balanced."[4] Spaatz reiterated the point in a letter to Arnold, dated March 7: "the ability of the enemy to attack our troops with dive bombers indicates that the enemy has control of the air or our forces are improperly controlled or that essential equipment is lacking. The solution lies in an acceptance of the principle that the first prerequisite to the support of the ground army or armies is the establishment of a fighter defense and offense, including RDF, GCI and other types of Radar equipment essential for the detection of enemy aircraft."[5] The arrival of the radar equipped U.S. 3rd Air Defense Wing and additional British radar for XII ASC and 242 Group allowed NAAF to establish a radar net covering the front by April.[6]

Continuing his inspection of the tactical fields, Spaatz lunched with Col Williams and Lt Gen Fredendall at Le Kouif, a field to the Northeast of Youks-Les-Bains, on March 3rd. He found the soon-to-be--relieved Fredendall's attitude on air altered; "General Fredendall, in contradiction to the last visit. . . has considerably broadened in his viewpoint of air importance. He realizes the necessity of seizing and holding airdrome areas and high or dominating ground necessary for proper RDF coverage."[7] Fredendall had learned, too late, the role of

[4] *Ibid.* Command Diary Entry, 2 March, 1943.

[5] *Ibid.*, Ltr, Spaatz to Arnold, 7 March, 1943.

[6] Craven and Cate, *Torch to Pointblank*, p 169-170.

[7] Command Diary Entry, 3 March 1943, Spaatz Papers, Diary.

tactical air. In his after action report he wrote, "ground forces should have it explained to them that it is not necessarily true that the air should furnish them with a visible 'umbrella', but that air is being furnished in the average operation even when our planes are not visible from the ground. Also that this air support includes not only cover and reconnaissance over them, but also bombardment of enemy troops and airdromes."[8]

From Williams, Spaatz received a testimonial on the efficacy of the Air Support Parties-- AAF liaison teams with the forward elements of the ground troops, equipped with a VHF radio mounted on a 1 1/2 ton truck. These units had supplied some of the quickest and most accurate information on the combat situation that the higher commanders received. AAF formations had made it a habit to pass within range (15 miles) of the Air Support Parties in order to get exact information on conditions in the target areas. At least once, the Air Support Party (ASP) called down a strike on enemy forces in close contact with their own.[9]

Spaatz's front line inspections revealed a morale problem in the Strategic Air Force as compared to the Tactical Air Force. In the medium bomber and fighter groups of the Strategic Air Force acute shortages of replacement planes and crews accounted for much of the problem.[10] This issue had become particularly severe in February, but, thanks to increased ferrying of new aircraft from the United States and the unsnarling of the replacement pipeline through France's African possessions, the AAF corrected one half the problem by the end of March, when Spaatz could report to Stratemeyer, "tell the Boss that there is a very, very noticeable improvement in the airplane situation."[11] The lack of replacement crews, unlike the airplane shortage, did not lend itself quite so readily to a production line solution. Like the AAF's other numbered air force commanders, Spaatz's problem of war weary crews and the rotation of experienced crews would continue to haunt him until the war's end. Many crews felt they had done their duty and ought to be allowed to go home because initial rotation policies seemed to imply one could go home after a minimum of either 30 combat missions or 200 hours of combat flying. When circumstances required additional missions, morale plummeted.[12]

[8] Rpt, Maj Gen L.R. Fredendall, Subj: Notes on Recent Operations on the Tunisian Front, 10 March 1943, Fredendall Papers, Eisenhower Presidential Library, Abilene, Kansas.

[9] Command Diary Entry, 3 March 1943, Spaatz Papers, Diary.

[10] Craven and Cate, *Torch to Pointblank*, p 130.

[11] *Ibid.*, p 131 and Ltr, Spaatz to Stratemeyer, 26 March, 1943, Spaatz Papers, Diary.

[12] "Report on Morale (United States Army Air Force Personnel)", Col. Everett Cook

(continued...)

Spaatz did what he could to improve morale. On several occasions he ordered "more attention to awards and decorations." He attempted to ensure that the daily AFHQ press communiques gave NAAF its full share of credit and did not subordinate its activities to ongoing naval and ground actions. In a move he thought particularly important toward the raising of morale, Spaatz ordered the photos of bombing results released to the crews.[13] This meant a lot to men who flew over the same target mission after mission, yet had never seen the damage done because of the smoke of their own bombs or because their own evasive action to avoid enemy anti-aircraft fire obscured an accurate view of the results.

Like Union General Joseph "Fightin' Joe" Hooker, who faced a similar morale problem in the Army of the Potomac after its defeat in the Battle of Fredericksburg, Spaatz took measures to improve the camp life of his soldiers and to supply them with the creature comforts dear to the American fighting man. Spaatz replaced unfamiliar and disliked British tents and rations in the combat units with American ones. He ensured that flying personnel had cots and established messes and recreation rooms. He set up separate rest camps for officers and enlisted men, improved facilities in all camps, and requested larger Red Cross participation in those camps. Likewise, he endeavored to place motion picture projectors in each station; made sure each unit had religious services available to it; and ordered the Surgeon's Section to survey the entire area for malaria. Morale, according to his staff, responded by taking a decided upturn.[14]

After completing his tour of the front, Spaatz inspected the rear echelons. He flew to Marrakesh on Saturday, March 6. There he decided to keep the airfield complex under the control of NAAF, rather than to transfer it to the Air Transport Service. This meant he kept control of the terminus of the trans-Atlantic ferry route in his own hands.

Another result of this inspection was the issuing of a standardized set of specifications for airfield construction. This, in conjunction with aviation engineer reinforcements, the arrival of heavy construction equipment above the normal table of organization, and a decision to retain all aviation engineers under the control of the NAAF combined to greatly increase the size and number of forward airfields.[15] The new airfields multiplied the force available to Coningham and Spaatz.

By March 12 Spaatz returned to Algiers. There he learned of his promotion to lieutenant general. He appreciated the honor and the

[12](...continued)
to CG, NAAF (Spaatz), 20 April 1943, Spaatz Papers, Diary.

[13] *Ibid.*, Staff Meeting 4 March, 1943 and Conference Notes, 5 March 1943.

[14] *Ibid.* "Report on Morale".

[15] Beck et al., *Corps of Engineers: War Against Germany*, p 89.

increased status it gave him. Coningham, as an Air Marshal, had until then technically outranked him, but he noted in a letter on the total AAF personnel situation in North Africa, "I have been much less concerned about promotion for myself than adequate promotion for a number of officers who are doing a General's job without the rank."[16] This remained a problem until June 1943 when Eisenhower, after repeated requests from Spaatz, promoted four AAF officers.[17]

The Air War Against Axis Supply Lines

In the middle of March 1943, NAAF headquarters moved from Algiers to Constantine. The move placed it closer to the front and enabled it, in Spaatz's words, "to control the Strategic and Tactical Air Forces during the Tunisian Battle."[18] In Constantine, on March 17th, Spaatz, Doolittle, and Allied air officers of the Coastal Air Force met to analyze the effectiveness of the anti-shipping campaign. From ULTRA sources they knew the daily unloading returns from Tunis and Bizerta.[19] These confirmed that "The shipping strikes have not been sufficient to bring down the amount of supplies into Tunisia below the danger point to the Germans."[20] Spaatz recommended singling out tanker shipping and concentrating all forces on it. Photo reconnaissance and "other intelligence" would show the tankers' locations. By January ULTRA could already determine full details of sixty percent of all cargoes.[21] Of course, ULTRA could not supply every detail necessary to plan a raid. The conference hammered out responsibilities for photo reconnaissance (Coastal Air Force), minimum forces exclusively devoted to anti-shipping (two squadrons of the Strategic Air Force), and chain of command (Coastal Air Force would notify Strategic Air Force Headquarters of targets and SAF would decide composition of the force.) The conferees also agreed to strengthen communication links between the two air forces.

This settling of respective jurisdictions, better flying weather in March and April, and the end of the crisis on the ground, which had diverted Strategic Air Force strength to ground support strikes, all

[16] Ltr, Spaatz to Stratemeyer, 26 March 1943, Spaatz Papers, Diary.

[17] Chandler, *Eisenhower's Papers*, II, item 986, Ltr, Eisenhower to Spaatz, 12 May 1943, pp 1125-1126.

[18] Ltr, Spaatz to Arnold, 7 March, 1943, Spaatz Papers, Diary.

[19] Hinsley, *British Intelligence*, II, p 576.

[20] Conference Notes, 17 March, 1943, Spaatz Papers, Diary.

[21] Hinsley, *British Intelligence*, II, p 575.

combined to greatly increase the ship killing opportunities for Doolittle's command. Improvement in aircraft replacement rates, reinforcement by one medium bomber and two heavy bomber groups, and the transfer, in March, from Cairo to Algiers, of an intelligence group specialized in the study of the enemy supply situation and the selection of shipping targets,[22] added to the strength and effectiveness of Doolittle's anti-shipping blows. British aircraft flying out of Malta and night patrols by British Royal Navy ships and submarines put further pressure on the Axis supply lines. In March the Axis unloaded 43,125 tons of supplies, as compared to 49,600 tons in February. The following month unloadings plunged to 29,233 tons.[23] Post-war figures show that in March and April 41.5 percent of seaborne cargoes dispatched to Tunisia failed to reach North Africa--loss of Axis shipping in March, not made good in April, accounted for that month's lower tonnage. Only four ships of over 3,000 tons reached Africa in April. Furthermore, the daily unloadings steadily declined throughout the period from 1,300 to 700 tons.[24] By the end of April the Allied tactical air forces had joined the fray and they, too, began to fly anti-shipping strikes.

Naturally, the Axis increased their resupply effort in the face of the Allies' onslaught. They diverted as much high priority seaborne supply as possible to small ferries, landing craft, and naval vessels. The Axis Powers also turned to air transport. As a British official history states, "Enigma {ULTRA} made it plain that his higher rate of fuel consumption {the principal air transport cargo} and the increasing destruction of his shipping had made the enemy critically dependent on air supply."[25]

Throughout the Tunisian Campaign, German air transport ferried large numbers of personnel and amounts of supply to the Axis North African bridgehead. This transport proved an invaluable aid in November and December 1942, when the surprise Allied landings called for a rapid response. In those 2 months the GAF brought in 37,000 men and 9,000 tons of material. After the initial surge, traffic declined to between 50 to 20 landings a day at the end of the year. German transport landings then began to climb until they reached 150 a day by late March, 1943. In February 1943 air transport brought in 11,000 personnel and 4,000 tons of supplies. In all, excluding March, this airlift conveyed 71,000 troops and 23,000 tons to North Africa.[26]

No one appreciated this Herculean effort of the *Lüftwaffe* more than Spaatz. On January 16 he instructed his staff to draw up plans

[22] *Ibid.*, p 574.

[23] *Ibid.*, p 607.

[24] *Ibid.*, pp 607-608.

[25] *Ibid.*, p 607.

[26] Craven and Cate, *Torch to Pointblank*, p 189.

"to get after" the daily parade of JU-52 traffic across the straits.[27] Two days later, January 18, he "told Cannon to send out a strong fighter force occasionally to swat the JU-52 daily procession coming across the Straits."[28]

The British, too, developed plans to disrupt Axis air transport. Eastern Air Command drew up plans for such an operation on February 5 and expanded the plans to include the XIIth Bomber Command. This operation, code named FLAX, fell afoul of the exigencies of the Kasserine crisis, which siphoned off all available air, causing the cancellation of the strike.[29] In March Spaatz returned to the scent. At a March 4 NAAF staff meeting he directed the Strategic Air Force to include attacks against Axis air transportation in its priorities.[30] When NAAF drafted a plan to ruin any attempted Axis evacuation from Tunisia, destruction of German air transport received first priority.[31]

At the beginning of April, Tedder, Spaatz, Doolittle, and Coningham met for a "Dunkirk" conference, in order to finalize plans for action against the expected Axis withdrawal attempt. Spaatz, with Coningham's seconding, disagreed with Tedder on whether the chief target priority should be air or sea transport. Spaatz stated, "at the present time we are in doubt as to whether we are justified in getting away from sea transport and hitting air transport; but on the evacuation, unless we can believe air is the most important, we will be continuously in doubt as to what to do."[32] As the discussion continued, it turned to implementing FLAX. Tedder agreed "emphatically" with FLAX as a separate operation, but not as a general or continuing plan. He remarked that Eisenhower would probably agree to FLAX as a specific operation to take priority over everything. Tedder objected to waging an air campaign exclusively against air transport. To Spaatz's suggestion for assignment of first priority to air transport, Tedder returned the negative. Tedder "insisted" that shipping remain the prime target. ULTRA intercepts tended to confirm Tedder's judgement. They showed shipping carried eight to ten times more tonnage than aircraft to the bridgehead, in February and March.[33] Once Tedder had driven that point home, he allowed his subordinate the authority to attack "air transport when specific targets arise." That satisfied Spaatz, who

[27] The Germans used tri-motored Junkers Model 52s (JU-52) as their chief transport aircraft.

[28] Command Diary Entries, 16 and 18 January, 1943, Spaatz Papers, Diary.

[29] Craven and Cate, *Torch to Pointblank*, p 189.

[30] Staff Meeting, 4 March, 1943, Spaatz Papers, Diary.

[31] *Ibid.*, Command Diary Entry, 20 March, 1943.

[32] *Ibid.*, Conference Notes, 2 April, 1943.

[33] Hinsley, *British Intelligence*, II, p 607.

observed in any case of sea versus air transport the value of the individual target would always determine its selection.[34]

Eisenhower apparently accepted the plan. On April 5 the Strategic Air Force conducted the first FLAX strike. A morning fighter sweep splashed 11 JU-52s and 5 escorts into the sea. Next B-17s struck the Tunisian landing fields, where the transport shuttle terminated, with fragmentation bombs. Around noon more B-17s and B-25s finished off the affair by dropping fragmentation bombs on the Sicilian airdromes, Boccadifalco, Trapani, and Borizzo, where the second daily flight for Tunisia usually formed up. These actions totally disrupted service, because an afternoon P-38 sweep found the straits empty. The bomber raids caught the Axis with their planes bunched together on their fields and inflicted heavy damage. The *Lüftwaffe* acknowledged losses of 14 JU-52s shot down, 11 transports destroyed on the ground, and 67 transports damaged. The AAF claimed 201 enemy destroyed, and admitted its loss of 3 aircraft with 6 unaccounted for. Additional attacks on April 10th and 11th resulted in claims of 67 transports and 13 escorts.[35]

Spaatz wrote to Eaker in England describing the carefully laid trap set for the Germans. Before executing FLAX the Allies had observed German air transport activity via photographic reconnaissance and radar coverage, but had not interfered with the daily flights. This lulled the methodical Germans into establishing a regular schedule, making them more vulnerable to the initial Allied attacks.[36] Because of the extremely sensitive nature of ULTRA information, Spaatz avoided the mention of ULTRA's contribution to the success of the operation. The breaking of the code sent on the *Lüftwaffe's* Enigma cipher machine gave details of cargoes, variation of convoy routes, flight cancellations, and German defensive measures. RAF "Y", the RAF tactical intercept service, added more information with its readings of local *Lüftwaffe* and IAF air transport radio traffic. "From the study of this traffic the intelligence staffs derived their familiarity with points of arrival and departure, the time taken to unload and turn around, the normal routes, and the strength of the escorts."[37] The German Air Force had notoriously bad signal security.

After April 17 the Western Desert Air Force took over the execution of FLAX from the Strategic Air Force. The WDAF, with newly captured airfields around Sousse, a coastal city on the Gulf of Hammamet only ninety miles from Cape Bon (one-third the distance from the Strategic Air Force fields), staged the "Palm Sunday Massacre" the next day.

[34] Conference Notes, 2 April, 1943, Spaatz Papers, Diary.

[35] Craven and Cate, *Torch to Pointblank*, pp 189-190.

[36] Ltr, Spaatz to Eaker, 8 April, 1943, Spaatz Papers, Diary.

[37] Hinsley, *British Intelligence*, II, pp 608-609.

WDAF P-40s and Spitfires attacked a homeward bound air convoy. They sent 50 to 70 out of 100 transports and 16 escorts spinning into the Mediterranean. The next day they added 12 out of 20. The Axis, in desperate condition on land and sea, persevered in the face of this pounding. They brought in air transport reinforcements and kept flying. Even instructor crews participated in the one-sided fight.[38] On April 22 the Germans lost an entire flight of twenty-one ME-323s. These six-engined converted gliders had four times the cargo capacity of the JU-52, but had little maneuverability, generated barely enough speed to keep themselves airborne, lacked armor and self-sealing gas tanks, and had no chance against the Allied fighters which pounced on them. Three days later ULTRA revealed Goering's order to switch all transport flights to night. This step greatly reduced air resupply into Tunisia and ended FLAX.[39]

Throughout the FLAX operation the Strategic Air Force had continued its raids on the Axis staging airdromes. These raids completed the destruction of the German air transport fleet and resulted in the loss of numerous Axis escort and anti-shipping aircraft, as well. Of the 263 German transports available at the beginning of April, the *Lüftwaffe* lost 157 by the 27th of that month.[40] This did not include Italian transports and Axis bomber aircraft pressed into transport service. One estimate placed total losses at 432 aircraft. These losses, combined with the casualties the German Air Transport Service suffered in its attempts to supply the German Sixth Army in the Stalingrad pocket in Southern Russia, crippled German air transport for the remainder of the war.[41]

Operation FLAX and the equally successful strangulation of seaborne traffic doomed the Axis land forces in Africa to defeat. Only forty tons of diesel and motor fuel remained in the bridgehead at the time of their surrender.[42] Allied intelligence had selected its shipping targets so carefully that the only surplus remaining to the Axis was food rations, which had purposely not been sunk in anticipation of having to feed Axis prisoners of war.[43]

The interdiction campaign, like the adoption of British air support techniques, provided an example of the victory of wartime improvisation over pre-war doctrine. Neither subject had captured the imagination of the inter-war Army Air Corps theorists. Yet both of these aspects of the

[38] National Security Agency Special Research History number 13 (SRH-013), "Ultra History of US Strategic Air Force Europe vs. German Air Forces," 6 June, 1945, Office of Air Force History Library , p 62.

[39] Hinsley, *British Intelligence*, II, p 609.

[40] *Ibid.*

[41] *Ibid.*

[42] *Torch to Pointblank*, p 196.

[43] Hinsley, *British Intelligence*, II, p 614.

Tunisian Campaign have served as models for future AAF and USAF doctrine. Never again has U.S. air power participated in such an effective supply interdiction effort. Nor has U.S. air power ever had so many advantages over the enemy. The Allies had broken almost every major cipher used by the enemy, they had overwhelming air and naval superiority, which they could freely apply to the restricted area of the Cape Bon-Sicily narrows, and they fought an over-extended and, to some extent, disheartened enemy.

Nonetheless, Spaatz contributed to the success of the operation in two ways. He insisted that airborne as well as water transport be interdicted, thereby closing a vital supply-line which specialized in the delivery of petroleum products--a vital necessity to the Axis forces in the bridgehead. Secondly, like the other senior air officers, he saw and seized the opportunity for air power to demonstrate its effectiveness by taking advantage of the Axis forces' vulnerability to an aggressive air interdiction campaign. If the air leaders had not agreed on a common campaign then many Germans might have escaped from Tunisia as they would later do in Sicily.

Heavy Bombardment Aviation in Tunisia

The pride of the AAF, heavy bombardment aviation, performed well and sometimes spectacularly well during the Tunisian Campaign. From November 1942 through May 1943 only twenty-four B-17s became combat casualties; enemy fighters accounted for eight of them, flak and other causes took the other sixteen.[44] In a letter summarizing the campaign, Spaatz wrote to Arnold, "The impact of the well flown B-17 formation into the European air picture has been tremendous and, in my opinion, will be the decisive factor, unless the Germans find some means of opposing it better than they have now."[45]

After a slow start, the heavy bombers made their first raid beyond North Africa on February 7, 1943, when they hit a major airdrome in Elmas, Sardinia. This raid, according to American claims, damaged a large percentage of the Axis anti-shipping capability stationed at Elmas, thereby enabling an Allied convoy to escape further losses.[46] Two more raids in February struck port facilities in Cagliari, Sardinia, and Palermo, Sicily. These missions established the pattern for subsequent

[44] Craven and Cate, *Torch to Pointblank*, p 194. After the first month of the campaign the Twelfth Air Force did not operate B-24s, which because of their superior range became the exclusive province of the Ninth Air Force.

[45] Ltr, Spaatz to Arnold, 24 May, 1943, Spaatz Papers, Diary.

[46] *Ibid.*, Ltr, Spaatz to Arnold, 8 February, 1943.

months. Strategic Air Force medium bombers (B-25s and B-26s) concentrated on shipping, while the heavy bombers (B-17s and B-24s) attacked the loading and unloading facilities at both ends of the Axis supply lines. Occasionally, the B-17s went after convoys or ships in harbor.

Two raids produced dramatic results which helped enhance the AAF's faith in the destructiveness of its preferred weapons system. On April 10 B-17s sank the Italian heavy cruiser *Trieste* with 1000 lb. bombs dropped from 19,000 feet. The same raid damaged the *Goriza*, one of Italy's two remaining heavy cruisers. The dramatic before and after pictures received full circulation during the war, and even the post-war U.S. Army and Air Force official histories selected them for publication.[47] Four days earlier B-17s had blown up an ammunition ship in convoy to Tunisia--that pyrotechnic display also earned wide coverage.

As usual, Arnold pressed Spaatz (and his other combat commanders) to provide the public and the President with evidence of destruction by bombing. Arnold was concerned that an unsophisticated public would not understand why "our early units were not as well trained as units committed to combat should be," why "we did not suddenly have a great striking force prepared to operate against Germany," and why the AAF required "a necessary 'feeling out' period."[48] Arnold needed proof of accurate and devastating bombing. On April 10 he cautioned Spaatz, that "many people in high places" were asking hard questions about the exact details of damage inflicted by Spaatz's forces. "It will help us a great deal in defending your operations," noted Arnold, "and in building up a correct picture of the results being accomplished if you will make a special effort to have a summary on the subject gotten back here about every two weeks."[49]

Eleven days later, in response to an earlier Arnold request for information on Kasserine Pass and anti-shipping operations, Spaatz wrote that he hoped Arnold had received his daily operations reports, the weekly intelligence summaries, and "the special folders of significant heavy bomber operations."[50] Spaatz cited four special folders already sent; (1) the March 22 Palermo raid, which Spaatz earlier called one of the most destructive of the war,[51] (2) the April 6 ammunition ship

[47] Craven and Cate, *Torch to Pointblank*, p 184, and Office of the Chief of Military History, *US Army in World War II*, subseries: *The Pictorial Record, The War Against Germany and Italy: Mediterranean and Adjacent Areas* (Washington D.C.: OCMH,GPO, 1951), p 164.

[48] Ltr, Arnold to Spaatz, 10 April, 1943, Spaatz Papers, Diary.

[49] *Ibid.*

[50] *Ibid.*, Ltr, Spaatz to Arnold, 21 April, 1943.

[51] *Ibid.*, Ltr, Spaatz to Stratemeyer, 26 March 1943.

strike, (3) the sinking of the *Trieste*, and (4) an April 13 mission against the Castelvetrano Airdrome, Sicily. These four special folders must have helped Arnold greatly in his defense of precision bombing.

Spaatz failed to mention a devastating raid by the 97th Heavy Bombardment Group on airfields in the Souk El Arba area on February 22, the high point of the German Kasserine attack. In an interview over thirty years later General Kuter still remembered the incident well--the B-17s used "anti-personnel bombs, hundreds of them all over, and killed a lot of people."[52] Unfortunately, the base belonged to the RAF; the bombers had missed their intended target by 100 miles. Prompt apologies from and a thorough investigation by the Strategic Air Force mollified the British who chalked the incident up to the fortunes of war.[53] It was no wonder Spaatz did not send a special folder on this mission.

Appropriately, when Spaatz quietly chose to fly on a limited number of combat missions, he flew on the heavies. On at least three occasions, which can be verified in his diary, and probably two or three more times, Spaatz personally participated in B-17 raids. On March 31 he rode in the nose of one of the 97th Group's bombers on a mission over Decimonannu airdrome, Sardinia. Next he flew in one of the 301st Group's planes on the April 13 Castelventrano airdrome raid and two weeks later, April 27, observed the bombing of Villacidro airdrome from one of the 97th Group's fortresses.[54] The Castelventrano raid lost one airplane to anti-aircraft fire. Eisenhower's personal naval aide, Captain Harry Butcher, who knew Spaatz well and often played in Spaatz's late night poker games, states that Spaatz told him, but not Eisenhower, that he had flown on a raid over Palermo, which lost three planes, two to fighters and one to flak, on April 14. Butcher added "it wasn't the first by any means."[55] Given the information in Spaatz's papers and Butcher's diary, Spaatz apparently flew no less than four or five missions. This leads to the reasonable conclusion that he flew a strike with each of the heavy bombardment groups in his command, the 2nd, 97th, 99th, and 301st.

Spaatz's flights demonstrated bravery but did they demonstrate another quality essential to command--wisdom? If one accepts the casualty figures, he personally witnessed one-sixth of all B-17 combat losses for the campaign. He did not choose milk runs. In fact he appears to have exposed himself to great danger and, while doing so,

[52] USAF Oral History Program Interview of General Lawrence S. Kuter, September 30-October 3, 1974, p 305.

[53] *Ibid.*, and Command Diary Entry, 23 February 1943, Spaatz Papers, Diary.

[54] Command Diary Entries, 31 March, 13 April, and 27 April, 1943, Spaatz Papers, Diary.

[55] Butcher, *Three Years with Eisenhower*, p 287.

ran very real risks. If his plane had gone down and he were captured, the enemy might have forced the ULTRA secret from him, to the significant detriment of the war effort. His loss in battle might also have damaged AAF prestige and shaken faith in the possibility of daylight bombing.

On the other side of the coin, Spaatz's flights demonstrate a cardinal principle of good command--leadership. He had a morale problem in the Strategic Air Force. What better way to help ease it than to let his men know "the old man" shared their risks? How better could he understand the physical, mental, and organizational problems of flying a wartime raid? Military history abounds with examples of leaders who failed because of plans based on absolute physical impossibilities. One need only remember the apocryphal tale of the World War I British staff officer, who burst into tears on his first visit to the front, when he realized the hopelessness of attacks he had helped to plan and execute.

Nor did Spaatz, in this instance, take absurd chances. B-17 strikes had far lower loss rates than anti-shipping or ground support attacks. Spaatz apparently participated as an observer only. He did not interrupt normal crew procedure or put himself in the cockpit. In choosing raids on coastal targets he lessened the risk of capture, because he could parachute or have the aircraft set down into the water with a chance of rescue by his own side. Moreover, recent evidence shows that the ULTRA secret had reached levels far lower than his own, so that his knowledge of it was not unique to personnel flying combat missions.[56] One more individual risking the secret hardly increased its risk of compromise. On balance, Spaatz's combat missions were justified. He ran reasonable risks, while having a positive effect on his own and his men's morale and gaining invaluable insight into the day-to-day workings of his command. As a commander he had a duty to lead by example in combat. He fulfilled that duty without so indulging in it that it compromised his capacity to carry out his higher responsibilities.

His experiences did not dampen his belief in precision bombing. In late May, after his B-17 flights, he summed up the performance of the heavy bombers, when he wrote, "In our day to day operations at the present time, we feel any area can be completely neutralized, even blown into oblivion, by high altitude attacks, without incurring any serious losses on our part." He went on to bemoan the loss of a year in mounting a massive strategic campaign against Germany--an attack, which in Spaatz's opinion, would have had a decisive effect if properly followed up.[57]

[56] Richard H. Kohn and Joseph p Harahan (eds.), *Air Superiority in World War II and Korea*, series: *USAF Warrior Studies* (Washington, D.C.: Office of Air Force History, GPO, 1983), pp 56-60.

[57] Ltr, Spaatz to Arnold, 24 May 1943, Spaatz Papers, Diary.

Ground Operations and Air Support

As the Strategic Air Force tightened its grip on the Axis supply lines, the Allied ground forces, assisted by the newly formed Tactical Air Force, shattered the Axis land forces in a nine-week long assault on the Italian-German bridgehead. Under the able leadership of Coningham, the U.S. XII Air Support Command, the Western Desert Air Force, and 242 Group soon gained air superiority. The fighter-bombers and light bombers of the Tactical Air Force roamed the battlefield unhampered by the *Lüftwaffe*.

Coningham's appointment to head the Tactical Air Force improved the performance of the tactical forces. The first coming of Coningham did not, however, provide a universal nostrum to the ills of air-ground cooperation in North Africa. Not all the ground or air commanders succumbed to the New Zealander's messianic expressions of the new support arrangements. Nor did "Mary's" combative temperament ease his path. He felt that the Americans, with less than six months wartime experience, had nothing to teach him. In the subsequent campaign in Sicily, he made this abundantly and personally clear to Spaatz in a scene one observer noted, "was the first time I saw personal Anglo---American relations go wrong at that level."[58]

Coningham had also begun to develop an obsessive and splenetic hatred of Montgomery, who in the Air Marshal's opinion, had filched the laurels of victory at El Alamein from Coningham and the air arm.[59] This in turn led Montgomery to place increasing reliance in the abilities of AVM Harry Broadhurst, Coningham's replacement in command of the WDAF. The Montgomery-Broadhurst collaboration proved extremely effective in supplying tactical air support to the ground troops under Montgomery's command through North Africa, Sicily, Italy, and Normandy. It served as ample proof of the importance of personal compatibility in the air-ground equation.[60] Spaatz, while scrupulously declining to interfere with Coningham's over-all direction of the tactical battle,

[58] Solly Zuckerman, *From Apes to Warlords* (New York: Harper & Row, 1978), p 204.

[59] Carlo D'Este, *Decision in Normandy* (New York: E.P.Dutton, Inc., 1983), pp 218-219.

[60] Nigel Hamilton, *Master of the Battlefield: Monty's War Years 1942-44* (New York: McGraw-Hill, 1983), pp 199-200. Hamilton even goes to the absurd length of crediting Broadhurst with the development of British air support theory--a gross misinterpretation of actuality.

spent much of his time smoothing waters in Coningham's wake and in convincing American officers of the value of the new doctrine, if not of the value of its bearer.

While Coningham's appointment to head the Tactical Air Force improved the performance of the tactical forces, Spaatz and the AAF in North Africa did not accept Coningham's system *in toto*. They disagreed with his orders of March 17, which forbade Tactical Air Force planes from communicating with air support parties. The air support parties (ASP's) consisted of an AAF-manned liaison team, equipped with a VHF radio on a 1 1/2 ton truck, that travelled with the forward ground elements and provided immediate contact with planes overhead. To Coningham the practice of American aircraft checking in with the air support parties smacked of excessive control of air by the ground commander. This violated the principle of unity of air command. It also threatened to short circuit the whole British system by providing a direct link between the pilots and individual ground units. Such a link abbreviated the functions of the Fighter Wing Control Room, lessening the control of the over-all air commander.[61]

Col Williams, the XIIth ASC's commanding officer, after discussion with his group leaders and pilots, asked for a reconsideration. He advised his superior that the air support parties exercised neither command nor control of his planes. They merely provided a quick and valuable communications link with the ground forces at the point of combat.[62] Spaatz intervened on behalf of Williams's position, and the air support parties continued to provide their useful services.[63]

American use of air support parties illustrated part of the differences in Allied air coordination practices. While the Americans absorbed many lessons from the British, the two organizations did not form mirror images. The Americans regarded the ASP as the equivalent of a British "tentacle", but they did not follow the example of having an air liaison officer at each forward airfield. Instead, the ground unit getting support sent one of its own officers to the airfield to brief the air commander. In the WDAF/8th Army scheme, the Army processed air requests from subordinate units, decided on its priorities, and at that point presented its requirements to the WDAF, which then had complete control over all operational aspects of performing the mission.

The Americans used different communication channels. Instead of II Corps Headquarters developing air requests from its subordinate units, XII ASC Headquarters developed requests received direct from the ASP's. The ASP commander not only served as air-ground liaison, but doubled as a member of the ground unit's staff. After allocating its

[61] Msg, A188, AOC, NATAF to XII ASC, 17 March 1943, Spaatz Papers, Diary.

[62] *Ibid.*, Memo,, HQ, XII ASC to OIC, NATAF, 23 March 1943.

[63] *Ibid.*, Command Diary Entry, 25 March and 14 April 1943.

aircraft to specific strikes, XII ASC then confirmed its decisions with II Corps G-3(Operations). If G-3 approved, then XII ASC carried out the missions according to the ASCs' plans and the force available. The Americans believed in the superiority of their procedure because it introduced qualified air opinion at the beginning of the request, thereby preventing air commitment to unsuitable or impossible tasks. While Williams correctly informed Coningham that the ASP did not command or control aircraft, a function technically reserved to XII ASC Headquarters, the Americans apparently did not inform him or he apparently did not understand the essential role of the ASP in the American scheme of ground support.[64]

If Coningham's original order had remained in effect it would have totally disrupted American air-ground cooperation. Therefore, the Americans resisted this attempt unilaterally to impose British methods from the top. In practice, however, both the British and the American schemes worked equally well. Later, Spaatz took the American procedures with him to England in 1944. There the U.S. Ninth Air Force based its air support request procedures on them. With Spaatz's departure in 1944 the Mediterranean Theater adopted the British procedures.

Even before Coningham's arrival to command the Tactical Air Force, Spaatz had observed to Stratemeyer that with Coningham "at the head of our Air Support Command, it can readily be seen that something is bound to break out in a very short time."[65] Air-ground relations remained tranquil until the first of April. After the Kasserine crisis, Allied ground and air units prepared to renew the attack on the Axis. The logistics situation improved dramatically. Unlike early December and January, Spaatz reported that the forward fields had sufficient bombs and gasoline for operations.[66] The NAAF needed only one item to remove the principle remaining bottleneck in its logistics--motor transport. On March 30 Spaatz complained that II Corps still had 450 AAF trucks. Seven days later he asked Eisenhower for more transport to move the air force forward, even if trucks had to come from II Corps.[67]

After a pause to reorganize after the defeats of mid-February, II Corps resumed the offensive. Although XII ASC was now under the operational control of Coningham, the Air Marshal followed the earlier and logical course of having each air contingent support its own land forces. But, in keeping with Coningham's ideas, XII ASC gave first

[64] VIII Air Support command, "Air Operations in Support of Ground Forces in Northwest Africa (15 March-5 April 1943)," observers report, US Army Military History Institute, Carlisle, Pa.

[65] Ltr, Spaatz to Stratemeyer, 8 February 1943, Spaatz Papers, Diary.

[66] *Ibid.*, Command Diary Entry, 13 March 1943.

[67] *Ibid.*, Command Diary Entries, 30 March and 10 April 1943.

priority to counter-air operations rather than ground support for II Corps.

On March 17th, following intensive artillery and air preparation, Patton's II Corps took Gafsa and began to attack toward the sea coast, 75 miles away. By then XII ASC's operational strength had risen to 116 Spitfires, 49 P-39s, and four photographic reconnaissance planes.[68] The Support Command's medium bombers had transferred to the Tactical Bomber Force, a centralized tactical bomber command directly under Coningham's control. Spitfires suffered from their short endurance and inability to drop bombs. The P-39s served only as fast ground attack planes, because they could not compete in a dogfight with the superior Axis fighters in the theater. The XII ASC had two responsibilities for this phase of the battle: 1) to protect the forward move of II Corps and 2) to obtain and hold air superiority over the air forces opposed to it in order to free the entire Western Desert Air Force to assist the 8th Army attack on Rommel at the Mareth Line. The Tactical Bomber Force, composed of both British and American medium bombers, would supply striking power to XII ASC for the task of hitting Axis airfields. Coningham also had the power to require Strategic Air Force missions on enemy fields during critical days of the offensive.[69]

Rain grounded portions of the Tactical Air Force and mired II Corps in mud, postponing the offensive until March 29th. For the next twelve days II Corps made little progress against heavy German resistance. A number of fruitless and costly attacks, which gained negligible results, made the period between March 28 and April 2 particularly frustrating for Patton and his men. On the morning of April 1, a German air attack killed one of Patton's personal aides, Captain Richard N. Jenson, and landed a bomb within a few feet of Maj Gen Omar N. Bradley, the deputy corps commander.[70] Jenson's death upset Patton greatly.[71] This grief and frustration manifested itself, in part, against Allied air support, which Patton felt had abandoned him.

This represented a *volte-face* of his previous attitude. Just prior to this series of attacks, Spaatz, on a trip to the front, had elicited from Patton, on March 24th, and Maj Gen Terry Allen, Commander of the 1st Infantry Division (the "Big Red One"), on March 25th, expressions of

[68] Rpt. CG, XII ASC(Williams) to CG, NATO(Eisenhower), Subject: "Report of Operations," 9 April 1943, p 8, NA RG 337, AGF Central File 319.1/83, Box 245.

[69] Report of the Northwest African Tactical Air Force on Operations, February 18 - May 11, 1943, n.d. (May 1943), p 20, PRO AIR 20/5535

[70] Omar N. Bradley, *A Soldier's Story* (New York: Henry Holt and Co., 1951) p 62, and Omar N. Bradley and Clay Blair, *A General's Life* (New York: Simon and Schuster,1983), p 147.

[71] Blumenson, *The Patton Papers*, II, p 205.

approval concerning their air support.[72] Patton and Allen voiced these opinions shortly after the most significant direct support action by XII ASC during this part of the campaign. On March 23 and 24 XII ASC bombed and strafed enemy tanks, motor transport, and troops in the El Guettar (1st Division) sector.[73] Neither general may have been fully aware that XII ASC's priority mission was counter-air against the Axis air opposite it, rather than ground support.[74]

By April 2, however, Patton, as on other occasions during the war, could no longer contain his anger. He proceeded to issue a situation report (sitrep) highly critical of the air effort. "Forward troops," the sitrep stated, "have been continuously bombed all morning. Total lack of air cover for our units has allowed German Air Force to operate almost at will."[75] Patton gave the report wide circulation, which added to the anger and chagrin of Allied airmen. Coningham reacted predictably. He gave even wider circulation to a choleric message of his own. After first noting that the XIIth ASC had provided 260 sorties on the day in question and that, furthermore, enemy air action had resulted in only four killed and a small number wounded, Coningham continued, "on receipt of sitrep it was first assumed to be seasonal first April joke." Then Coningham continued his assumptions, "it is assumed that intention was not to stampede local American air command into purely defensive action. It is also assumed that there was no intention to adopt discredited practice of using air force as an alibi for lack of success on the ground. ...it can only be assumed that Two Corps personnel concerned are not battleworthy in terms of present operation." Finally the Tactical Air force commander requested, "that such inaccurate and exaggerated reports should cease. XII ASC have been instructed to not allow their brilliant and conscientious support of Two Corps to be affected by this false cry of wolf."[76] Other circumstances added to the Air Marshal's anger. He later complained to Tedder's headquarters that the provocation was "particularly intense" and "consisted of a solid 48 hours of Sitreps, signals and telephone calls, three of them being to General Alexander." In the meantime, "there was no communications to General Williams commanding the American air, nor to my headquarters, but all the other addresses of my signal were included. They were

[72] Command Diary Entries, 24 and 25 March 1943, Spaatz Papers, Diary.

[73] Howe, *Northwest Africa*, p 562 and NATAF Final Report, p 24, PRO AIR 20/5535.

[74] NATAF Final Report, p 24, PRO AIR 20/5535.

[75] Msg, SPEC 40 NATAF to NAAF (Spaatz), 2 April 1943, Spaatz Papers, Diary. This message cites text of Patton's message.

[76] *Ibid.*

all based on false information because General Patton is living 40 miles away from his airmen and does not know the air position."[77]

This Patton-Coningham fracas had the potential of damaging both air-ground and inter-Allied relations. Spaatz, Tedder, and Eisenhower all reacted sharply. Tedder, in his memoirs and with his usual lack of self-effacement, stated that he corrected the situation himself. After he received a copy of the Coningham message, Tedder phoned Eisenhower and told him that as AOC, Mediterranean Air Command, he had instructed Coningham to cancel his message and to travel with Tedder to Gafsa in order to apologize to Patton in person. This meeting, Tedder claims, resolved the situation and converted Patton to a friend. Tedder added that his prompt handling of the problem prevented Eisenhower's resignation.[78]

Spaatz's command diary entries, recorded at the time of the event, contradicted Tedder's memory. Upon exiting a joint MAC-NAAF staff meeting, which put the final touches on the "Dunkirk" plan, Spaatz, and, presumably, Tedder received copies of Patton's original message. The "inaccuracy" and "unjustness" of the sitrep and its wide distribution provoked "great concern."[79] The next morning Spaatz and Tedder, as they prepared to fly to the front, received Coningham's intemperate reply. They flew to Thelepte, met Kuter and Williams, and investigated the lack of air support reported by Patton. The WDAF, they found, had scheduled 160 fighter sorties for April 1, but weather had interfered. The XII ASC had failed to attack a tank concentration because the ground forces had cancelled the planned attack when artillery moved into range of the tanks. Finally, they discovered a lack of radar coverage to the east of Gafsa, which prevented effective employment of the fighters already stationed there.[80]

The four air officers then motored from Thelepte to Patton's Headquarters in Gafsa. Patton must have dumfounded them when he said "Williams was giving him good air support and that he was satisfied." The air officers expressed their apprehension at the separation of Patton's and Williams's headquarters--a violation of the spirit of the new doctrine. Patton had moved forward to a position that communications had not yet caught up to. This left Williams's headquarters, which required good communications to supervise its forces, too far behind.[81]

By a quirk of fate, 2 to 4 German aircraft strafed and bombed Patton's headquarters at the same time as the conference on lack of air

[77] Ltr, Coningham to AVM H.E.P. Wigglesworth, Deputy Commander Mediterranean Air Command, 5 April 1943, PRO AIR 23/7439.

[78] Tedder, *With Prejudice*, pp 410-411.

[79] Command Diary Entry, 2 April 1943, Spaatz Papers, Diary.

[80] *Ibid.*, Command Diary Entry, 3 April 1943.

[81] *Ibid.*

support occurred. One of the airmen remarked to Patton "I always knew you were a good stage manager, but this takes the cake." Patton replied, "If I could find those sonsabitches who flew those planes I'd mail them each a medal."[82] In a far less celebrated incident, the airmen had a measure of revenge on the *Lüftwaffe* the same day, when XII ASC fighters intercepted a German Stuka (dive bomber) formation and shot down 13 of 16.[83]

That afternoon Tedder and Spaatz flew on to visit the WDAF, at Medinine, behind the 8th Army's front. Spaatz saw, first hand, that 8th Army had much more effective air support than the other Allied land forces in Tunisia. With Williams and Patton's chief of staff in tow, Spaatz provided some on-the-job training, by inspecting the joint WDAF/8th Army headquarters set-up. He noted that Montgomery, unlike Patton, left his main headquarters adjacent to air headquarters, even if he personally moved an advanced command post closer to the fighting.[84] The German masters of the *Blitzkrieg*, Generals Irwin Rommel and Heinz Guderian, employed similar methods in directing their own armored attacks.

During their visit to the front, Spaatz and Tedder talked at great length about Coningham's reply to Patton. When they returned to Williams' headquarters on April 4, Tedder wrote a reprimand to Coningham, which he sent to Spaatz who forwarded it to Headquarters, NAAF for transmission to the Commander of the Tactical Air Force. Tedder then called Eisenhower with an explanation. Tedder next rang up Coningham, who he directed to see Patton post haste.[85] Coningham did as ordered. He met Patton at noon the same day. The two immediately engaged in a shouting match, with both protesting their faith in their own men. Once the bellowing stopped, the atmosphere cleared and the two general officers got down to business. Coningham, as ordered, apologized. Patton graciously accepted, as if he, himself, had done no wrong, and they both agreed to cancel and withdraw their respective messages. Patton recorded in his diary, "We parted friends, and I think we will now get better air support than ever before." As Patton well knew the squeaky wheel gets the oil.[86] In a contrite letter to Tedder's deputy, AVM H.E.P. Wigglesworth, Coningham said of Patton, "I like him very much, he is a gentleman and a gallant warrior. But on the slightest provocation he breathes fire and battle, and as I also like fighting I could not resist the challenge when he turned the barrage on

[82] Tedder, *With Prejudice*, p 411.

[83] NATAF Final Report, p 24, PRO AIR 20/5535.

[84] Command Diary Entry, 4 April 1943, Spaatz Papers, Diary.

[85] *Ibid.*

[86] Blumenson, *The Patton Papers*, II, pp 208-209.

to me."[87] Coningham sent out a new message, in which he regretted that his original signal might have been interpreted as a slight on American forces and blamed an egregious error in transmission, "two Corps" instead of "Few corps." The new signal concluded with the withdrawal of his offending message and an indication that Coningham considered the matter closed.[88]

Eisenhower, however, had the last word. As Spaatz's chief of staff, Col Edward (Ted) Curtis, recalled, the Coningham-Patton scuffle angered Eisenhower considerably.[89] Eisenhower still had his steam up on the morning of April 5th, when he wrote Marshall, "the past week has been a very trying one and was notable for one incident that disturbed me very much. This involved a very unwise and unjust criticism of II Corps by a senior member of the British Air Force." Eisenhower concluded, "there was really no excuse for the thing happening."[90] Later in the morning of that same Monday, Spaatz and Eisenhower met for a conference. Naturally, the incident became a chief topic of conversation. Spaatz defended Coningham. Patton, in Spaatz's view, had initiated the affair with a sitrep so accusative that notice had to be taken of it. Patton should restrict his "grousing" to proper channels, besides which his movement of his headquarters to a spot inaccessible to Williams's headquarters could only have decreased the possibility of effective support. Spaatz pointed out that, in any case, Patton had gotten 160 sorties from the WDAF. Eisenhower responded by suggesting a large scale air operation in support of II Corps, a suggestion passed forward by Spaatz to Coningham.[91] The squeaky wheel had gotten the oil.

This meeting apparently changed Eisenhower's appreciation of the affair. Late in the day he wrote to Patton, and suggested that Patton let the matter drop, in the interest of "*the great purpose of complete Allied teamwork* (Eisenhower's Italics)." He chided Patton for demanding an additional "pound of flesh" and observed, "in connection with this matter I am since informed that there was a certain amount of unwise distribution of your sitrep." He admonished Patton that in the future any criticism of another service or collaborating agency should be made by means of a "confidential" report through the proper chain of command or, better yet, with "a friendly and personal conference with the man responsible." He summed up his feelings with a final exhortation: "you and Spaatz, with your respective subordinates, are at the moment

[87] Ltr, Coningham to Wigglesworth, 5 April 1943, PRO AIR 23/7439.

[88] Msg, SPEC 46 NATAF to NAAF, 5 April 1943, Spaatz Papers, Diary.

[89] USAF Oral History Program Interview of Maj. General Edward Peck Curtis, October 22-23, 1975, p 55.

[90] Msg, Eisenhower to Marshall, 5 April 1943, *Eisenhower's Papers*, II, item 927, p 1071.

[91] Command Diary Entry, 5 April 1943, Spaatz Papers, Diary.

carrying the burden of battle command for the American side of the house. In both of you I have the most tremendous confidence and I therefore feel that you have every right to have my opinion on these matters as accurately as I am able to express them."[92] Patton noted, "Ike told me later that he could not punish Conyngham (sic) because he was a New Zealander and political reasons forbade."[93] This ended the incident, but the problem of perfecting air-ground cooperation remained.

On several occasions in April and May, Spaatz journeyed to the front to try to correct close air support arrangements. His visit to the U.S. 34th Infantry Division, on April 8th, particularly incensed him. This untried division, recently detached from II Corps and assigned to the British 9th Corps, had failed to reach its objective, partly because of confusion over a planned air attack. The 9th Corps cancelled the air attack around midnight April 7/8 and so notified 34th Division. At 8:00 AM Maj Gen Ryder, the 34th Division Commander, realizing his infantry had not advanced as far and as quickly as planned, tried to reinstate the air attack for 8:30 AM, but the planes did not appear and at 9:30 AM the division called off the air attack once more.[94] The 34th had needed air help and had not gotten it. In following up the lack of support, Spaatz discovered that air-ground communications had failed. The 34th had not realized that it could call for air support directly to XII ASC through its own air support party. The XII ASC, assigned to support II Corps, had just moved 75 miles to the Northeast (From Thelepte to LeSers), placing it too far from both II American and 9th British Corps Headquarters. Nor had XII ASC been aware of its continuing responsibility for the 34th Division. To make matters worse for the pride of the 34th Division the British assault went well and at its end the British commander of the 9th Corps recommended the withdrawal of the 34th from combat and retraining of its junior officers at the rear under British guidance.[95]

Spaatz diagnosed the air-ground problem as stemming from the ground forces own confused lines of authority. XII ASC could not effectively cooperate with two widely separated masters. Upon his return to Constantine, Spaatz suggested the formation of a new army headquarters to supervise both corps. This headquarters, sited alongside Williams's headquarters, would allow XII ASC to do its job effectively. "Any organization which had air forces available but could not get their machinery in motion to apply them," stated Spaatz's diary, "was

[92] Msg, Eisenhower to Patton, 5 April 1943, *Eisenhower's Papers*, II, item 928, pp 1072-1073

[93] Blumenson, *The Patton Papers*, II, p 210.

[94] Howe, *Northwest Africa*, pp 586-587.

[95] *Ibid.*, p 590.

faulty." Williams had had the forces to aid the 34th, but because of a poor control set up could not apply them.[96] Eisenhower rejected this solution, probably because a new Army headquarters would have had to have been an American one and Eisenhower may not have felt the time correct to introduce that issue.

Meanwhile Montgomery continued his pursuit of the retreating Italian-German Army Group. His march along the Mediterranean coast, from the Mareth Line to Enfidaville, moved the Southern boundary of the bridgehead one hundred miles north. This left the U.S. II Corps with no front to occupy. Allied commanders, anticipating this "pinching out" of II Corps, had already ordered it to prepare to transfer to the far northern edge of the bridgehead, where the corps could advance on Bizerta. This move, begun on April 12, placed II Corps under Anderson's First Army. The shrunken size of the Axis-occupied area left room for only two air control sectors, and since XII ASC supported II Corps, now under the operational control of First Army, XII ASC joined 242 Group, 1st Army's air support formation, as a subordinate unit. WDAF had the other air control sector.[97]

As II Corps completed its move across the 1st Army's entire line of communications and 8th Army's drive stalled at Enfidaville, a lull in the fighting ensued. Spaatz, mindful of previous deficiencies in cooperation between II Corps and XII ASC, used this breather to make a move to strengthen the bond between the two organizations. He had observed the air liaison officer at II Corps and found him wanting. The job needed a more positive personality. Therefore, Spaatz instructed Kuter to have a high ranking air officer, preferably either himself, or Williams, present at II Corps HQ for the impending battle.[98] This move apparently had little effect.

The gesture did not halt the flow of complaints from Lt Gen Omar N. Bradley, who had replaced Patton as the Commander of II Corps, or Anderson. The 1st Army initiated its new offensive on April 22, the same day the *Lüftwaffe* began a general withdrawal from its African bases. From that point on the *Lüftwaffe* ceased to play a significant role in North Africa and the Tactical Air Force discontinued airfield attacks as a matter of policy, turning instead to ground support.[99] Because this offensive was the major effort of the theater, 1st Army had a great say in the allocation of air on its front and had the responsibility of joint planning with air for its attacks. Anderson proved he had learned nothing new about air operations. For the final breakthrough Coning-

[96] Command Diary Entry, 8 April 1943, Spaatz Papers, Diary.

[97] Craven and Cate, *Torch to Pointblank*, pp 198-199.

[98] Command Diary Entry, 20 April 1943, Spaatz Papers, Diary. I could find no evidence concerning which officer stayed with II Corps.

[99] NATAF Final Report, p 28. PRO AIR 20/5535.

ham placed the entire Tactical Air Force and all the medium bombers the Strategic Air Force could spare under the operational control of 242 Group, the air headquarters co-located at 1st Army headquarters.[100]

In preparing the final plan 1st Army never consulted 242 Group---not even as to zero hour for the assault. Since 1st Army chose zero hour as dawn, air could not get airborne in time to bomb the first objective. Bombing of the second and third objectives played a great part in the army's breakthrough. This, however, was a case of good fortune since the target, the Medjez valley, normally had a seasonal morning mist from 0900 to 1000. For each of the four days before the attack the mist had come and had obscured the second and third objectives.[101]

According to 242 Group, Allied air made every effort to placate the ground forces. These measures included several non-standard procedures. Provided the Army limited its requests to one or two attacks a day, 242 Group would attack *any* target regardless of suitability. The group also placed at 1st Army disposal a considerable force for its use as artillery. This brought little result; 242 Group claimed 1st Army dissipated the force made available in 70 different attacks against 44 separate targets.[102]

On April 29, Eisenhower visited Spaatz at his villa in Constantine to make Spaatz aware of the dissatisfaction of Bradley and Anderson with their air support. To Spaatz it appeared the complaints resulted from the two generals' inability to get exactly what they wanted when they wanted it. Spaatz told Eisenhower he would go forward and straighten out the matter the next day, April 30th.[103] During his visits to both headquarters, Spaatz found the conditions he expected. Lack of communications, not aircraft, proved the culprit.

Anderson needed reassurance. The appearance of newly identified German formations on his front had convinced him that the air force had not done enough to stop enemy movement. He did not realize that these units appearing on his front were remnants of units already broken by Montgomery in the south. Spaatz pointed out that the chief priority of the Strategic Air Force and, more recently, of the WDAF was the interruption of enemy reinforcements and supply. No doubt the latest ULTRA intercepts, which reflected the great decline in unloadings, strengthened Spaatz's defense of the effectiveness of the air effort.[104]

[100] Playfair, *The Destruction of Axis Forces in Africa*, p 447.

[101] Report on Air Operations by 242 Group R.A.F. in Support of 1st Army Tunisia, 1943, n.d. (c.a. May 1943), p 13, PRO AIR 23/7434.

[102] *Ibid.*, p 11.

[103] Command Diary Entry, 29 April 1943, and Ltr, Stratemeyer to Arnold, 7 May 1943, Spaatz Papers, Diary.

[104] *Ibid.*, Msg, Spaatz to Eisenhower, 1 May 1943.

At II Corps NAAF's Commander found dissatisfaction with both photo reconnaissance and the level of air support received. He traced both problems back to 1st Army Headquarters, rather than to a lack of desire of XII ASC to provide assistance to II Corps. Bradley's command did not get all the air missions it requested because 1st Army, which set air priorities for all the forces it controlled, did not approve all II Corps requests. Spaatz had no authority to change that arrangement, although he did attach XII ASC's tactical reconnaissance squadron directly to II Corps, and tie II Corps G-2 (Intelligence Staff) into reconnaissance pilot briefings.[105] In attaching one of his air units directly to the ground unit it supported, Spaatz, of course, violated the doctrine of concentration of air assets. Once again he demonstrated his refusal to allow doctrine to overcome common sense. He thought it better to bend a rule than to remain straight-jacketed by theory and to leave the army blind.

Spaatz could do nothing, however, about 1st Army's allocation of air missions. 1st Army denied II Corps' requests because all available air strength was being employed in front of the 1st Army's British troops to help them blast through stiff German opposition. A return visit, by Spaatz, on May 4th, revealed improvements in the situation and greater satisfaction with air support.[106] Spaatz checked the time elapsed from a II Corps request for air and its clearance through Army headquarters and discovered no great delay. He did find 1st Army Headquarters had refused requests because its judgement of the situation differed from II Corps'.[107]

Later Spaatz reminded Eisenhower of his previous warnings that the arrangements for the new battle would prove unsatisfactory. Matters would not improve until American forces had their own independent army or corps commanders with their staffs located alongside XII ASC's headquarters. But present circumstances caused Spaatz to recommend against change, and Bradley's corps would have to continue as heretofore. Spaatz also noted the heavy sortie rate of tactical aircraft and stated that 1st Army had used its available air resources to the maximum.[108] The collapse of the bridgehead and its final surrender on May 13, 1943, ended the Tunisian Campaign. This speedy finish obviated the need for further tinkering with the air-ground relationship.

At the conclusion of the campaign, Tedder and Spaatz felt it necessary to formalize NAAF and MAC command arrangements. This threatened to destroy the cohesiveness of both organizations when both

[105] *Ibid.*

[106] *Ibid.*, Command Diary Entry, 4 May 1943.

[107] *Ibid.*, Msg. Spaatz to Eisenhower, 1 May 1943, and Ltr, Stratemeyer to Arnold, 7 May 1943, Spaatz Papers, Diary.

[108] *Ibid.*,

British and American staffs separately drew up complicated organizational charts, began bickering over respective rank and seniority, and insisted on instituting procedures unique to their own service. To use Tedder's phrase, "the back hairs began to bristle." At Tedder's morning meeting on May 12th, the disagreement came to a head. Spaatz complained of Mediterranean Air Command's usurpation of NAAF headquarters' functions, by going direct to NAAF's subordinate commands. This, in Spaatz's opinion, indicated improper organization. Tedder shot back, "if you want a divorce, you can have one here and now, repeat now!" After that exchange, it took only a few moments for reason to return. The parties agreed to shelve their draft documents and to get on with fighting the war.[109]

This spat undoubtedly influenced Spaatz's final judgement of the headquarters' arrangements. On May 24, 1943, he wrote to Arnold that the organization had been made to work and had proved adequate for the job at hand, "but it is too dependent on personalities to be sound." Spaatz believed the Americans had learned much from the British, particularly in the handling of administration, operations, and intelligence. The British had absorbed an equal amount concerning the application of strategic air power.[110]

Spaatz and Changes in AAF Air Support Doctrine

The AAF emerged from the campaign with a new and clearly defined doctrine of air support of which much, but not all, stemmed from RAF developments. Spaatz absorbed this doctrine, expounded it to Arnold and the rest of the AAF hierarchy, and oversaw its development in his command. In addition to the constant stream of information Spaatz sent back in his numerous letters and reports to Arnold, he found time, while on an inspection trip to Marrakesh on March 7, to write a long and thoughtful letter to Arnold describing the shortcomings of current official AAF doctrine on air support. He suggested seminal changes. Spaatz wrote, "I cannot believe that the situation here is of such a special nature that it requires a peculiar form of organization, but rather that it approximates the conditions under which our land forces will be confronted at least during the European phase of the war. It has become evident that what we considered the Air Support Command and the air support forces are not adequate for the purpose either in composition or organization, and by their very term give an erroneous

[109] *Ibid.*, Command Diary Entry, 12 May 1943. And Tedder, *With Prejudice*, p 399.

[110] Ltr, Spaatz to Arnold, 24 May 1943, Spaatz Papers, Diary.

impression to the ground army." Spaatz stated that the air support command needed access to heavy and medium bombardment units when the situation required it and that the ASC could not operate effectively nor could the army advance until the air force had achieved air superiority. Because air formations could move freely in the air, ignoring terrain, control of air should be centralized and not divided into small packets among armies or corps. Spaatz enumerated five requirements for support of the ground army:

> The establishment of a fighter offense and defense, including a complete radar network,
>
> The use of the fighter force to protect the army and to gain air superiority,
>
> The creation of a tactical reconnaissance force to meet the needs of the army,
>
> The creation of a fighter bomber force to attack targets in the battle area, and
>
> The employment of a bomber aircraft capable of operation at altitudes between ground level and 10,000 feet.

Once those five elements were achieved they could be combined to form a tactical air force. In fact Spaatz suggested the elimination of the term air support command. Spaatz also mentioned the invaluable role played by the air support parties in providing air support.[111] As a postscript Spaatz commented on the importance of personalities in the coordination of the air and ground efforts: "It must be based on the principle that the airman knows his job and the ground man knows his job, with a mutual respect for each others' capabilities and limitations. ...the ground or the air commander should be eliminated who cannot get along with his opposite number."[112] Arnold gave this and other Spaatz letters, which described operations and lessons learned, wide circulation.[113]

The March 7 Spaatz to Arnold letter echoed many of the principles found in War Department Field Manual (FM) 100-20, Field Service

[111] *Ibid.* Ltr, Spaatz to Arnold, 7 March 1943.

[112] *Ibid.*

[113] Ltr, Arnold to Spaatz, 6 May 1943, Folder "North African Operations," Arnold Papers, Box 39 and Memo, Brig Gen T.J. Hanley, Deputy Chief of the Air Staff, to all Assistant Chiefs of the Air Staff, Subj: Air Operations in North Africa, 20 April 1943, Decimal File 370.2 Africa (16), Arnold Papers, Box 104.

Regulations, "Command and Employment of Air Power," issued 21 July 1943. FM 100-20 institutionalized many of the lessons of the North African Campaign as drawn by Spaatz and disseminated by him to the War Department. The proximate cause of FM 100-20, however, was a note from the Assistant Secretary of War, Robert A. Lovett, to Marshall. Lovett sent Marshall a copy of a pamphlet published by General Montgomery. Montgomery, because of his ballyhooed victories over Rommel in the desert, had a prestige which no other Allied ground commander could match at this stage in the war. This gave his statements on the art of command a particularly authoritative air. On February 16, 1943 Montgomery and Coningham addressed an assemblage of Allied admirals and generals in Tripoli. Montgomery distributed a pamphlet entitled, "Some Notes on High Command in War." On page two of the work the general enunciated several tenets on the use of air power. Air power's greatest asset was flexibility, which enabled it to be concentrated for use as a striking force of the first importance. To gain concentration air control must be centralized and command should be through air force officers. Montgomery specifically forbade the dissipation of air resources into "small packets." He suggested that each army commander have an air headquarters with him to command all aircraft allotted to army support. These air forces would not, however, be under the "direct command" of the army commander.[114] Coningham added some RAF clarification to Montgomery's remarks. He put the WDAF/8th Army experience into its simplest form saying, "the soldier commands the land forces, the Airman commands the air forces; both commanders work together and operate their respective forces in accordance with a combined Army-Air plan, the *whole operations being directed by the Army Commander* (author's italics)." The difference between "direct command" and "direction" had been solved for a time in the Western Desert. The difference between the two remained to be resolved between the AAF and the Army Ground Forces.

The Air Marshal made a further point that the air force had two tasks: first to gain air superiority, and afterwards to apply 80% to 90% of its hitting power to the enemy ground forces.[115] Within days Spaatz sent Arnold a copy of the pamphlet.[116]

On April 18 Lovett sent a copy of "High Command in War" to Marshall. He drew the Chief of Staff's attention to page two claiming it confirmed the principles of the War Department reorganization of June

[114] Pamphlet, Bernard L. Montgomery, "Some notes on High Command in War," p 2, NA, RG 165, OPD file 384 case 39, Box 1305.

[115] Talk by Air Vice Marshal Sir A. Coningham, 16 February 1943, Tripoli, PRO AIR 20/5535.

[116] Ltr, Spaatz to Arnold, 19 February 1943, AF/CHO Microfilm Reel A1657A, frames 965-966.

1941, which established the Army Air Forces as an semi-autonomous entity within the Army. The Assistant Secretary then observed, "General Montgomery's statement with respect to the use of air power contains much material which, although accepted by the Army in principle, has not been formally embodied in our written doctrine, as far as I know."[117] Marshall apparently referred the matter to the War Department General Staff's Organization and Training Division, G-3, asking if the doctrines were acceptable to the Army, whether they should be embodied formally in Army literature, what action had been taken so far by G-3, and what did G-3 recommend?

G-3 replied that the AAF and the AGF had opposite views on the acceptability of Montgomery's doctrine. Montgomery's doctrine did not appear in Army literature. The division pointed to a previous attempt to reconcile new doctrine by citing a joint AAF-AGF air support board appointed on December 2, 1942. The board failed to agree and postponed any reconsideration of FM 31-35 pending further proof gained by combat. If anything the board revealed a hardening of positions as the AAF insisted on change in the direction of the Western Desert doctrine, while the AGF wished to decentralize air control to levels below division level and to emphasize close-in, on-call missions to expand the zone of friendly artillery fire. In view of the AAF-AGF failure to compromise, G-3 recommended the revision of FM 31-35 and other appropriate War Department publications.[118] The Operations Plans Division, the Army's Washington command post, approved and widened the focus of G-3's recommendation. Noting G-3's concentration on the air-ground aspect of the problem, OPD addressed the larger question of overall command and employment of air units at the combat theater level. The Operations Division told Marshall that in its opinion the theater supreme commander should exercise his command through the senior officer of each service and in all cases the "*direct* {italics in original}" command of AAF forces must be exercised by the AAF commander. Nor should the supreme commander attach AAF units to units of the ground forces except when ground units were operating independently or were isolated by distance or lack of communication.[119] OPD recommended a position far closer to that of the AAF than of the AGF.

The Training Division began informal work on the doctrinal revision in early May. In spite of objections of AAF officers in the General

[117] Memo, for the Chief of Staff from the Assistant Secretary of War, 18 April 1943, NA RG 165, OPD-384, Box 1305.

[118] Memo, for the Assistant Chief of Staff, Operations Division from Col H.J. Matchett Acting Assistant Chief of Staff, G-3, Subj: General Montgomery's Notes on "High Command in War," 24 April 1943, NA RG 165, G-3 (370.6-384).

[119] Memo, for the Chief of Staff from Brig Gen J.S. Hull, Acting Assistant Chief of Staff, OPD, 29 April 1943, NA RG 165, G-3 (370.6-384).

Staff,[120] the Army Ground Forces were polled for their opinion. The AGF denounced any change. Not only was FM 31-35 basically sound, but British air support doctrine and methods, "particularly those of the Eighth Army" were fully considered and their best features adopted in FM 31-35. Likewise the U.S. air mission request system came from a study of the tentacle system. The AGF objected to the implications of the revision:

> wider separation of ground and air forces,
>
> little or no air support without air superiority,
>
> air support, when available, would be furnished on a basis dictated by the air commander,
>
> no attachment of air units to ground units,
>
> and no decentralization of air support.

The AGF further attacked the principle giving highest priority to the attainment of air superiority, saying that the deferment of air support was unsound "and would impose a serious and at times insurmountable handicap on the ground force commander concerned."[121]

The AGF protest had no effect on the General Staff. On May 31, a career air officer, Lt Gen Joseph T. McNarney, the Deputy to the Chief of Staff, acting for Marshall, instructed the Training Division to change the necessary training publications. McNarney specified that the new doctrine of the U.S. Army concerning command and employment of air power would include four points, two of which were never mentioned in General Montgomery's pamphlet;

> land and air forces were co-equal and independent,
>
> gaining of air superiority was the first requirement for success of any major land operation, therefore air would concentrate against the enemy's air forces until the obtainment of air superiority,

[120] Memo, for General Hull, Acting Assistant Chief of Staff, OPD, from Col S.E. Anderson, Subj: Revision of Training Literature, 8 May 1943, NA RG 165, OPD-384-Case-39, Box 1305. Col Anderson attempted to eliminate AGF coordination by claiming that input to revisions of an AAF manual need only come from the AAF. Brig Gen Hull overruled him, noting that revisions need not be unanimous. Anderson latter gained much experience in air-ground cooperation as the commander of IXth Bomber Command, a unit of medium bombers assigned to assist Lt Gen Omar Bradley's 12th Army Group during the campaign in Northwest Europe.

[121] Memo, for the Chief of Staff from Lt Gen Ben Lear, Commanding General, AGF, Subj: General Montgomery's Notes on "High Command in War," 17 May 1943, NA RG 165, G-3 (370.6-384).

> flexibility was air's greatest asset allowing concentration of the whole weight of air power on a specific target, and
>
> control of air power must be centralized and exercised through air channels of command, the theater commander would exercise command of the air force through the air force commander, and the theater commander would not attach AAF units to the ground forces unless the ground forces were operating independently or were isolated.[122]

The first section of FM 100-20, when published, consisted entirely of these four points repeating almost exactly the wording of the instructions and all in capital letters.[123] By the end of June McNarney and Arnold had personally approved a draft of the new manual.[124] Eight officers (including five generals) representing the infantry (2), the field artillery (1), the coast and anti-aircraft artillery (1), and air (4) had also carefully reviewed and approved the draft.[125] Three of those general officers (Maj Gen Stratemeyer, Brig Gens Kuter and Porter) either had combat experience in North Africa or had recently visited the theater. All three had certainly had extensive talks with Spaatz on changes needed in air doctrine.[126]

FM 100-20 reflected several of Spaatz's thoughts expressed in his March 7, 1943, letter to Arnold. According to Spaatz , "in order for the Army to advance the air battle must be won." FM 100-20 stated "The gaining of air superiority is the first requirement for the success of any major land operation."[127] Spaatz observed "the control of the air units must be centralized and command must be exercised through the Air Force commander...." FM 100-20, using all capital letters for emphasis, specified, "CONTROL OF AVAILABLE AIR POWER MUST BE EXER-

[122] Memo, for the Assistant Chief of Staff, G-3, from the Acting Chief of Staff, Subj: Revision of Training Literature, 31 May 1943, NA RG 165, G-3 (370.6-384).

[123] War Department Field Manual 100-20, Field Service Regulations, Command and Employment of Air Power, (Washington, D.C.: GPO, 21 July 1943), sec. I, para. 1-3, pp 1-2.

[124] Memo, for the Record attached to Memo, for the Adjutant General from Brig Gen Ray E. Porter, Assistant Chief of Staff G-3, Subj: Publication of FM 100-20, Field Service Regulations, Command and Employment of Air Power, 30 June 1943, NA RG 165, G-3 (370.6-834).

[125] Memo, for Colonel Nelson, G-3, from Colonel J.B. Burwell, G-3, 24 June 1943, NA RG 165, G-3 (370.6-384).

[126] See Command Diary Entry, 6 February 1943, for mention of Spaatz's discussion with Porter, Ltr, Stratemeyer to Arnold, 7 May 1943, for a connection to Stratemeyer, and Ltr, Kuter to Spaatz, 25 May 1943 all in Spaatz Papers, Diary.

[127] WDFM 100-20, "Command and Employment of Air Power," (Washington, GPO, 21 July 1943), Chapter 1, Section I, paragraph 2.

CISED THROUGH THE AIR FORCE COMMANDER."[128] Spaatz suggested a tactical air force composed of fighters, fighter bombers, medium bombers, reconnaissance aircraft and radar warning and control equipment; as did FM 100-20.[129] FM 100-20 also accepted almost word for word Spaatz's admonition concerning the necessity of establishing a fighter-radar network: "The first prerequisite for the attainment of air supremacy is the establishment of a fighter defense and offense, including RDF (radio direction finder), GCI (ground control interception), and other types of radar equipment essential for the detection of enemy aircraft and control of our own."[130]

The new manual reversed the strictures of earlier manuals. For example, FM 31-35 (9 April 1942) "Aviation in Support of Ground Forces" allowed the Army commander specifically to allocate aviation units to the support of subordinate ground units whenever operations required it.[131] FM 100-20 severely circumscribed that prerogative: "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."[132] The new manual also followed Spaatz's injunction that in times of vital and decisive action the strategic air force may join the tactical air force and be assigned tactical objectives.[133] In practice FM 100-20 did not significantly change air-ground cooperation methods established by the U.S. Army in Tunisia because they were already based upon it--thanks to Spaatz, Tedder, Coningham, and Eisenhower.

So well had Spaatz done his job of educating Arnold and the War Department that, when Kuter arrived back in the States shortly after the end of the campaign, he wrote to Spaatz, "my fiery conviction that air support to be effective must come from an air force co-equal and cooperating with the top ground force meets with practically no excitement. In fact that subject was released to the press without batting an eye by the War Department Bureau of Public Relations."[134]

A month later Arnold informed Spaatz, "With particular respect to the Tactical Air Force, the ideas you have worked up and forwarded to me are being implemented by Kuter and happen, at present, to be going full ball (sic) throughout the Air Forces and the War Department." Arnold also noted that the War Department would issue FM 100-20 in

[128] *Ibid.*, Chapter 1, Sec. I, para. 3.

[129] *Ibid.*, Chapt. 2, Sec III, para. 15.

[130] *Ibid.*, Chapt. 2, Sec. III, para. 16, sub-paragraph b.

[131] WDFM 31-35, 9 April 1942, Chapter 2, Section I, paragraph 6.

[132] WDFM 100-20, Chapt. 1, Sec. I, para. 3.

[133] *Ibid.*, Chapt. 2, Sec. II, para. 12.

[134] Ltr, Kuter to Spaatz, 25 May 1943, Spaatz Papers, Diary.

the Field Service Regulation format, making it (theoretically) binding on the theater commander, rather than in the field manual format, which served as a guideline only.[135]

The perfection of their own version of air-ground support doctrine was not the only agenda of Arnold and the Air Staff. They wished also to enhance the position of the AAF for the post-war fight for air force independence. After the war Kuter, for instance, admitted "my own writing during the period was slanted toward the formation of a separate air force."[136] He added that since his primary focus was on independence he had slighted the tactical air power position. The AAF authors of the manual could not resist the opportunity to integrate this agenda with the lessons of North Africa. Thus FM 100-20 became a vehicle to proclaim the independence of air power. Its entire first section, all in capital letters, was a unilateral declaration of independence. It began by stating, "LAND POWER AND AIR POWER ARE CO-EQUAL AND INTERDEPENDENT FORCES; NEITHER IS AN AUXILIARY OF THE OTHER."[137]

The manual's assignment of missions to the Tactical Air Force named close air support as the third and last priority after 1) attainment of air superiority and 2) the prevention of the movement of troops and supplies into the theater or within the theater of operations. In its discussion of this third priority the manual noted that, "in the zone of contact, missions against hostile units are most difficult to control, are most expensive, and are, in general, least effective," and "only at critical times are contact zone missions profitable." Finally the manual prescribed adjacent or common headquarters for the air and ground forces only when third and last priority targets were attacked.[138]

The Army Ground Forces, as noted above, did not concur in the publication of FM 100-20.[139] They feared that centralization of all air under an air commander, while perhaps guaranteeing the concentration of air, might fatally damage the AGF's concept of a combined arms force in which all Army strength, including air and ground, could be massed at the decisive point.[140] The AGF found significant and almost insulting FM 100-20's supersession of the recently published revision of the

[135] *Ibid.*, Ltr, Arnold to Spaatz, 28 June 1943.

[136] Ltr, Kuter to Col. Glen Martin, Special Consultant to the Secretary of the Air Force, 22 November 1950, AF/CHO Historical files, Folder "The Kuter Report."

[137] WDFM 100-20, Chapter 1, Section I, para. 1.

[138] WDFM 100-20, Chapt. 2, Sec. III, para. 16, subpara. b.

[139] 384 (S)-GNGCT (5-6-43), Memo, for the Chief of Staff from Lt Gen Ben Lear, Commanding General, Army Ground Forces, Subj: "General Montgomery's Notes on 'High Command' in War," 17 May 1943, National Archives, RG 165 Records of the War Department General and Special Staffs, G-3 370.6-384.

[140] Greenfield, "Army Ground Forces and the Air-Ground Team," pp 48-50.

AAF's principle manual, Army Air Forces Field Manual (FM) 1-5 "Employment of Aviation of the Army," dated January 18, 1943. This manual, which did not obtain wide circulation, was certainly known to the AGF and AAF Headquarters and just as certainly unknown to most, if not all, of the U.S. forces in North Africa. This manual, based in large part on information gathered by pre-war observers in England, authorized two practices banned by FM 100-20. It stated that when early warning facilities and communications were lacking, air defense aviation must conduct patrols. The manual added, "in some situations, and particularly along the line of contact between opposing ground forces, such patrols may also be employed to afford some measure of general protection for friendly aircraft in flight. The primary purpose of such patrols is, however, the protection of surface objectives rather than protection of friendly aircraft in flight."[141] The manual further noted that such patrols demanded an excessive number of planes and that the issue of anti-aircraft artillery to such units was a better alternative. Nonetheless, the manual authorized the penny packet employment favored by the ground forces, albeit as a last resort. FM 1-5 allowed for the practice of "control or target designation by certain units directly from an air support control, or air support officer *to aircraft in flight* (my italics)."[142]

FM 1-5 of January 1943 was the wartime culmination of the entire series of pre-war manuals. It took an evolutionary approach rather a revolutionary one. More than the earlier manuals, it addressed the conduct of strategic air operations in a manner close to that advocated by air power enthusiasts. It spoke of a strategic air offensive, stressed the necessity of staying with a single strategic target system and avoiding diversions, and discouraged using heavy and medium bombardment in direct ground support.[143] FM 1-5's treatment of ground support, as mentioned above, reflected the views of the AGF. Yet it stressed the interdiction mission of tactical air rather than that of close air support: "The hostile rear area is the most profitable zone of action for air support aviation... . Support aviation is not generally employed against objectives which can effectively be engaged by available ground weapons within the time required."[144] The manual recognized that aircraft were a theater level weapon best employed under centralized control; it allowed the direct attachment of air to ground units only under abnormal circumstances. But at the crucial point of the land battle, and only then, "would the requirements of the supported force be

[141] FM 1-5, 18 January 1943, Chapt 2, Sec. III, para. 26. Also see Chapt. 4, Sec. III, para. 57.

[142] *Ibid.*, Chapt. 5, Sec II, para. 63, sub-para b.

[143] *Ibid.*, Chapt 3, Sec. VI, para. 30.

[144] *Ibid.*, Chapt 5, Sec. I, para. 58, sub-para c.

paramount."[145] These provisions attempted to satisfy the ground commander's need to employ every available asset when necessary, against the airman's desire to conduct independent counter-air and interdiction missions. The AGF was loath to abandon FM 1-5 for FM 100-20.

Observations from North Africa must have confirmed this reluctance. The report of AGF personnel in North Africa revealed anything but the satisfaction Kuter and Spaatz reported back to Washington. Maj Gen Walton H. Walker, Commanding General, IV Armored Corps, arrived in Algiers on 21 April and left about the 8th of May, a time when the Allies had almost complete control of the air. At the very time Spaatz went forward to make last minute inspections and adjustments Walker reported, "Air-ground cooperation as envisaged in training and maneuvers of ground force units in the United States appeared to be non-existent in the North African Theater."[146] Both Patton and Bradley informed him that air support had been unsatisfactory, but Bradley did note recent improvement. Two items came in for great criticism, the quantity and frequency of air photographic reconnaissance and the AAF reliance on pre-planned as opposed to on-call air strikes--two areas of perennial ground force dissatisfaction that did and still defy mutually satisfactory agreement between air and ground.[147]

When Spaatz observed that the ground generals seemed dissatisfied, because they could not get all the air they wanted when they wanted it, he had hit the nail on the head. Both Coningham's and FM 31-35's cumbersome communications links which required ground requests for air to go from the ground unit to an air headquarters and from thence to an airfield lent themselves to concentration and centralization of air command and control by airmen. By the same token this communications system did not lend itself to speedy response to immediate ground air support requests. Throughout the campaign ground combat officers complained of the lack of on-call, or immediate response air strikes. Brig Gen Paul M. Robinett, Commander of the 1st Armored Division's Combat Command B, which suffered heavy casualties under British command, wrote to Gen Marshall and observed, " The coordination of tank attacks with infantry and air attacks has been perfect on the German side. On our own side it has yet to be achieved." Robinett implied very strongly that only placing all air and ground forces attacking an objective under the ground commander could solve the prob-

[145] *Ibid.*, sub-paras. d and e.

[146] Rpt, MG W.H. Walker to CG, AGF, Subject: Report of Visit to North African Theater of Operations, 12 June 1943, RG 337, AGF file 315.1, Box 242.

[147] *Ibid.*

lem.[148] At the campaign's end Col William B. Kern, a battalion commander of the 1st Armored Division, remarked, "I believe that we will have to come to some simple system of requesting air support. The present system of going back through so many channels is wrong. We haven't time for it." Maj Gen Charles W. Ryder, Commander of the 34th Infantry Division, added, "the system of calling through two or three different headquarters for air support simply will not give the support desired at the time desired. Adequate air support can only be obtained by direct call from the division to the air. Any other system," observed the general, "is too slow and will result in loss of opportunities."[149]

Given good two-way radio communication between pilots in the air and ground observers (a practice Coningham forbade and technology, at that point, could not guarantee), and a great many airplanes available for ground support missions (also not available until later in the war), the close air support problem could be overcome in wartime. During the campaign in Northwestern Europe, for instance, overwhelming numbers of fighter bombers and innovations such as two-way radios installed in the leading tank elements of attacking Allied armored units, allowed Allied tactical air forces to supply massive amounts of airborne firepower to the battlefield. FM 100-20 replaced FM 1-5, not FM 31-35. It left in place the clumsy, slow methods of air-ground communications found in the latter manual, which stayed in effect until a post-war revision. In practice, however, the troops in the field appear to have ignored FM 31-35 in favor of local air-ground arrangements.

Because of the time lag in dissemination of the product and its extreme time sensitivity in an active, fluid combat situation, "photo recon" did not lend itself to centralization at a high level. Spaatz attempted, only at the end of the campaign, to solve this by attaching XII ASC's photo reconnaissance squadron directly to II Corps.[150]

The AGF non-concurrence gave the promulgation of FM 100-20 the aura of an AAF putsch. As Kuter remarked to Coningham, "more people were defeated in Tunisia than Germans and Italians."[151] Why Marshall signed the manual remains a mystery. Perhaps he felt the need to make the concession to the AAF to mute more, and more public, agitation for independence.

[148] Ltr, Brig Gen Paul M. Robinett to Marshall, 8 December 1942, Arnold Papers, Folder: Air-ground support, Box 42.

[149] Greenfield, "Army Ground Forces and the Air-Ground Battle Team," p 77, citing statements by Kern, 13 May 1943, and Ryder, 18-19 June 1943.

[150] In addition to its employment difficulties air reconnaissance presented a "political" problem to the AAF in North Africa, because the commander of the chief photo reconnaissance unit was one of President Roosevelt's sons, Elliott Roosevelt.

[151] Ltr, Kuter to Coningham, 23 June 1943, AIR PRO 23/7439.

Although he fully understood the new doctrine, Spaatz did not regard it as the last word in Army versus AAF. In summing up the relationship with the Army Spaatz said, "the situation is normal. If it was not for the disturbance which would ensue, I would probably announce the urgent necessity of a separate Air Force." Even the most understanding contacts and intentions at the high command level could not counterbalance the ground and air differences, "which permeates the entire structure." In Spaatz's opinion, the minor day-to-day problems, not the strategic or tactical application of forces, proved the stumbling block of inter-service relations. "I will emphasize," he told Arnold, "that air operating under the command control of a ground officer will most probably be improperly used."[152] In an interview in 1965 Spaatz restated this point in answer to a question about the major lessons of World War II. Spaatz said, "I think the first lesson was the one about air being indivisible and in order to develop effectively, it must be controlled by air people that developed it, and not under the Army or any other form of organization other than the Air Force."[153]

At the beginning of the campaign in North Africa, the AAF and its commander encountered three problems which hampered their efforts to defeat the Axis; faulty organization, poor logistics, and the lack of an effective air-ground team.

By the time of the fall of Tunis and Bizerta, in May 1943, the Allies had built an organization, the NAAF, capable of employing air power in a flexible and coherent manner against the enemy. The functional separation of the Northwest African Air Force into a ground support force and a long-range bomber force necessitated by British experience in air-ground cooperation, on one hand, and the AAF's virtual theater-wide monopoly on long-range bombers, on the other hand, proved so sensible that the practice continues in the USAF to this day. The relatively smooth functioning of its combined staff served as a model for latter Allied organizations.

Spaatz played no small role in the success of NAAF. Perhaps his supreme ability as a commander was his willingness to delegate authority and responsibility. He resolutely refused to interfere with the day-to-day operations of either Doolittle or Coningham. He trusted them to do the jobs they had trained for. Instead, Spaatz served as a theater level air spokesman. Together with Tedder he kept Eisenhower aware of the needs and limitations of air power. On several occasions he served as Eisenhower's air troubleshooter. Eisenhower called on him to solve his air problems from the start to the finish of the campaign. When the campaign was two weeks old he ordered Spaatz to North Africa to bring order to the chaotic air situation. When the campaign had only two

[152] Ltr, Spaatz to Arnold, 24 May 1943, Spaatz Papers, Diary.

[153] USAF Historical Division Interview of Carl A. Spaatz, May 1965, p 25.

weeks to go Eisenhower sent him forward to solve Anderson's and Bradley's air support problems.

The Americans, despite claims to the contrary, did not develop an air-ground team. Spaatz himself had to spend days at the front during the campaign's finale tinkering with arrangements and dealing with Army complaints. Complaints continued into the Sicilian Campaign. Brig Gen Paul L. Williams, the XII ASC's commander and therefore the senior officer most closely connected to the ground forces, apparently made the error, in the eyes of other airmen, of identifying with his mission of close air support rather than with air independence. In one of his reports he made the mistake of saying, " I am thoroughly convinced that the organization of an Air Support Command based on the principles of FM 31-35, is sound, workable, and I strongly recommend that all such commands be organized in this manner with certain modifications as indicated herein." He added, " I and my principal staff officers lived and operated with the Corps Commanders during most of the period. This is absolutely essential."[154] Not surprisingly at the end of the campaign Williams found himself transferred from the XII ASC to a troop carrier wing where he could cooperate to his heart's content with Army airborne troops, while not being allowed to over-identify with close air support. After the war an Air Staff officer, who reviewed FM 100-20 before publication and had experience in North Africa, described the publication of Williams's report as "premature" and ascribed it to a misguided chauvinistic adherence to American concepts as opposed to British ones. The officer noted that Spaatz neither supported nor endorsed the report.[155] In actuality Spaatz suggested to Arnold that the report be "given the highest consideration,"[156] demonstrating that Spaatz, as a combat officer, did not take as hard a line on air-ground doctrine as the AAF staff in Washington.

Perhaps the most telling statistic showing the AAF's attitude toward close air support was the training status of the Army's ground divisions in the U.S. on January 1, 1944, six months before the invasion of France. Thirty-three still needed aviation for joint training and initial air-ground tests, 21 had not witnessed a recognition demonstration of the various types of aircraft, and 48 had had no opportunity to

[154] Rpt, HQ XII ASC to CG, NATO, Subject: "Report of Operations," 9 April 1943, National Archives, Washington D.C., RG 337, Army Ground Forces Central Files, File # 319.1/83, Box 245.

[155] Ltr, Kuter to Col. Glen Martin, Special Consultant to the Secretary of the Air Force, 22 November 1950, AF/CHO Historical Files, "The Kuter Report."

[156] Ltr, Spaatz to CG, AAF, Subj: Employment of Support Aviation, 27 May 1943, Spaatz Papers, Diary.

participate in the comparative air-ground firepower demonstrations required by regulations.[157]

Although close air support still failed to quite meet the mark, it had improved from the beginning of the campaign. The interdiction and counter-air phases of tactical air power proved spectacularly successful once the command and control arrangements of air improved enough to allow flexibility. This flexibility allowed both the concentration of all forces at the crucial time and place, such as FLAX or the close air support effort for Anderson's April offensive, and the encouragment of specialization of function, such as daily anti-shipping strikes by the Strategic Air Force, and the day-to-day supply of close air support by the Tactical Air Force.

For the relatively modest butcher's bill of 1433 casualties (277 killed in action, 406 wounded, and 750 missing, interned, or captured),[158] and 666 aircraft of all types lost on combat missions,[159] the AAF acquired a revision of air-ground support doctrine and gained recognition of the principle of equality between air and ground on the battlefield. Carl Spaatz was instrumental in that watershed development of American air power.

[157] Greenfield, "Army Ground Forces and the Air-Ground Combat Team," pp 42-43. Some divisions were double or triple counted in the above totals, the Army did not have 104 divisions in the U.S. on that date.

[158] Memo, Deputy AC/S, A-1 to Asst C/S, A-1, NAAF, 1 June 1943, Spaatz Papers, Diary. These figures include the last day of May 1943, and, therefore, slightly overstate total casualties.

[159] AAF, "Statistical Digest, World War II," table 160, p 256. These figures include the losses of the Ninth Air Force as well.

Glossary

PRO AIR/9
PRO AIR/20
PRO AIR/23

Records of the Air Ministry and miscellaneous correspondence from field commanders. The most important sources for Portal's and Bottomley's wartime thoughts and actions. The field correspondences gives crucial data from Coningham, Tedder, and Welsh.

PRO AIR/41

RAF Historical Monographs giving the RAF's own view of its activities. Includes valuable documentation and insights not available elsewhere. See below for further comments.

PRO CAB/101

The record copies of the British World War II Official Histories with additional information and backup documents not released at time of publication.

PRO PREM/3

The records of the Prime Minister as Secretary of Defense and war leader, useful for Churchill's views unfiltered by the need to look good in post-war publication.

London, England. RAF Historical Office.

Unpublished RAF, Air Historical Branch Campaign Narratives

"The North African Campaign, November 1942-May 1943."

The RAF Narrative History was a security classified monograph intended for internal RAF use, as such it was unusually frank in its criticisms of both the RAF and its sister services. It is of uneven quality, but represented a valuable historical source well worth examination. Microfilm copies are available at the Office of Air Force History, Washington, D.C. The Historical Office also maintains en extensive annotated index of RAF records given the PRO and backup documentation to its historical monographs.

III. PUBLIC RECORDS AND DOCUMENTS, PUBLISHED

U.S. Official Histories

Craven, Wesley Frank, and Cate, James Lea, eds. *The Army Air Forces in World War II*

Vol. II: *Europe: Torch to Pointblank August 1942 to December 1943.* Chicago: University of Chicago Press, 1949.

Vol VI: *Men and Planes.* Chicago: University of Chicago Press, 1955.

Craven and Cate, recently reprinted by the Office of Air Force History, is the starting point for any serious study of the AAF in World War II. One of its chief faults, however, is its lack of perspective. It tends to less objective concerning air problems than it might and it is somewhat unreliable for enemy casualty and loss figures. On many doctrinal points fails to present an objective viewpoint. Because the combat volumes are all well over thirty years old they lack the benefit of more recent scholarship. In addition the source materials for several of the work's chapters seem to have been scattered or broken up, making it difficult to identify and locate key documents referred to by the original authors. Despite quibbles about a few judgments and statistics, Craven and Cate, nevertheless, remains the authoritative and likely to be unsurpassed history of the AAF during the war.

UNITED STATES ARMY IN WORLD WAR II. OCMH. GPO.

SUBSERIES

THE WAR DEPARTMENT

Cline, Ray S. *Washington Command Post: The Operations Division.* Washington: OCMH, GPO, 1951.

Leighton, Robert W. and Coakley, Richard M. *Global Logistics and Strategy 1940-1943.* Washington: OCMH, GPO, 1955.

Matloff, Maurice, and Snell, Edwin M. *Strategic Planning for Coalition Warfare 1941-1942.* Washington: OCMH, GPO, 1953.

THE MEDITERRANEAN THEATER OF OPERATIONS

Howe, George F. *Northwest Africa: Seizing the Initiative in the West.* Washington: OCMH, GPO, 1957.

THE ARMY GROUND FORCES and MISCELLANEOUS

Beck Alfred M., Bortz Abe, Lynch, Charles W., Mayo, Lida, and, Weld, Ralph. *The Corps of Engineers: The War Against Germany.* Washington: CMH, GPO, 1985.

The Army green series supplies information on air-ground support, technical aspects of procurement, and pre-war planning. Pogue's volume on the Supreme Command and Matloff's two volumes on Strategic Planning provide essential information on high-level planning, with adequate treatment of air issues.

British Official Histories

Great Britain, Air Ministry. *The Rise and Fall of the German Air Force 1933-1945.* New York: St. Martin's Press, 1983.

Hinsley, F.H. *British Intelligence in the Second World War its Influence on Strategy and Operations.* Vol. II. New York: Cambridge University Press, 1983.

Hinsley, F.N. *British Intelligence in the Second World War its Influence on Strategy and Operations.* Vol. III, part 1. London: HMSO, 1984.

Richards, Denis and Saunders, Hilary St. George. *The Royal Air Force.* Vol. II, *The Fight Avails.* London: HMSO, 1954.

Playfair, I.S.O., Molony, C.J.C., Flynn, F.C., Gleave, F.L. *The Mediterranean and the Middle East.* Vol. IV: *The Destruction of the Axis Forces in Africa.* London: HMSO, 1966.

Hinsley's volumes are the intelligence histories of the war. They have precise information on the all important ULTRA organization as well as other sources of information. We are unlikely to ever get further government information on the activities of Allied intelligence other than in than this series. The Air Ministry history of the *Luftwaffe*, originally published in 1947, as a security classified document, is based on *Luftwaffe* records captured by the British and post-war interrogations of *Luftwaffe* and other high Nazi officials. Because of the fragmentary nature of surviving Luftwaffe documentation, almost 90% of it was destroyed at the end of the war, the work still presents one of the best comprehensive views of the German air arm. Playfair's volume, while glossing over some British shortcoming's, is a good integrated history of the Campaign.

Miscellaneous U.S. Government and Air Force Publications.

U.S. Department of State. *Foreign Relations of the United States: The Conferences at Washington, 1941-1942 and Casablanca, 1943.* Washington: GPO, 1968.

U.S. War Department. Army Air Forces. *AAF Statistical Digest, World War II.* Washington: GPO, 1945.

Carter, Kit C., and Mueller, Robert, eds. *The Army Air Forces in World War II: Combat Chronology.* Washington: AF/CHO, GPO, 1973.

Futrell, Robert Frank. *Ideas, Concepts, Doctrine: A History of Basic Thinking in the United States Air Force 1907-1964.* Maxwell Air Force Base: Air University Press, 1971.

(Greer, Thomas H.) *The Development of Air Doctrine in the Army Air Arm 1917-1941.* Maxwell Air Force Base: Air University Press, 1955.

Greenfield, Kent Roberts. *Army Ground Forces and the Air-Ground Battle Team: Including Organic Light Aviation.* Fort Monroe, Virginia: AGF Historical Section, 1948. AGF Study No. 35.

Kohn, Richard H. and Harahan, Joseph P., eds. *Air Superiority in World War II and Korea.* Washington: AF/CHO, GPO, 1983.

Momyer, William W. *Airpower in Three Wars.* Washington: AF/CHO, GPO, 1985.

Mortensen, Daniel R. *A Pattern for Joint Operations: World War II Close Air Support, North Africa.* Washington: AF/CHO and CMH, 1987.

Murray, Williamson. *Strategy for Defeat: The Luftwaffe 1933-1945.* Maxwell Air Force Base, Alabama: Air University Press, 1983.

Thompson, Wayne (ed.). *Air Leadership; Proceedings of a Conference at Bolling Air Force Base April 13-14, 1984.* Washington, DC: Office of Air Force History, GPO, 1986.

Watts, Lt Col Barry D. *The Foundations of US Air Doctrine: The Problems of Friction in War.* Maxwell, Air Force Base, Alabama: Air University Press, 1984.

Much of the AAF statistical data in this work relies on the "AAF Statistical Digest," a prime source for quantitative analysis of AAF operations. The Murray book on the *Luftwaffe* also vouchsafes data on both the AAF and the *Luftwaffe*, unfortunately the author concludes his study in September 1944. The Greenfield study gave the Army Ground Forces view of close air support. Thompson's work volume on air leadership offers an excellent discussion of Spaatz's unique style of command.

IV. UNPUBLISHED DISSERTATIONS

Fanton, Jonathan Foster. "Robert A. Lovett: The War Years." (PhD, Yale University, 1978.)

Meilinger, Phillip Stanley. "Hoyt S. Vandenberg: The Life of a General." (PhD, University of Michigan, 1985.)

Reynolds, Jon A. "Education and Training for High Command: General Hoyt S. Vandenberg's Early Career." (PhD, Duke University, 1980.)

Tate, James P. "The Army and its Air Corps: A Study of the Evolution of Army Policy Towards Aviation, 1919-1941." (PhD, Indiana University, 1976.)

Tate shows that, contrary to myth, the Army made a sincere effort to support its air arm, despite its limited resources. The works on Vandenberg and Lovett give useful details on the careers of those important individuals.

V. ARTICLES

Coningham, Arthur. "The Development of Tactical Air Forces," *Royal United Services Institute Journal* XCI (May 1946), 211-226.

Eaker, Ira C. "Part II: Memories of Six Air Chiefs Westover, Arnold, Spaatz," *Aerospace Historian*, Vol XX (December 1973), 188-197.

Eaker, Ira C. "Gen. Carl A. Spaatz, USAF," *Air Force Magazine* LVII (September 1974), 43-53.

Jacobs, W.A. "Strategic Bombing and American National Strategy, 1941-1943," *Military Affairs* L (July 1986), 133-139.

Lloyd, Hugh. "Allied Air Power in the Mediterranean 1940-45," *Royal United Services Institute Journal* XCII (November 1947), 554-566.

Simpson, Albert F. "Tactical Air Doctrine--Tunisia and Korea," *Air University Quartertly Review* IV (Summer 1951), 5-20.

Tedder, Arthur. "Air, Land and Sea Warfare," *Royal United Services Institute Journal* XCI (February 1946), 59-68.

Wolk, Herman S. "Men Who Made the Air Force," *Air University Review*, XXV (Septem ber - October 1972), 9-23.

Tedder's and Coningham's lectures were important to understanding the thought of the two men.

VI. MEMOIRS, BIOGRAPHIES, AND PUBLISHED PERSONAL PAPERS.

Ambrose, Stephen E. *The Supreme Commander: The War Years of General Dwight D. Eisenhower.* New York: Doubleday and Co., 1970.

Arnold, Henry H. *Global Mission.* New York: Harper & Row, 1949.

Blumenson, Martin, ed. *The Patton Papers.* Vol II: 1940-1945. Boston: Houghton Mifflin Co., 1974.

Blumenson, Martin. *Patton: The Man Behind the Legend, 1885-1945.* New York: William Morrow and Company, Inc., 1985.

Bradley, Omar N. *A Soldier's Story.* New York: Henry Holt and Co., 1951.

Bradley, Omar N., and Blair, Clay. *A General's Life.* New York: Simon and Schuster, 1983.

Butcher, Harry C. *My Three Years with Eisenhower, The Personal Diary of Harry C. Butcher, USNR Naval Aide to General Eisenhower, 1942-1945.* New York: Simon and Schuster, 1946.

Carver, Michael (ed.). *The War Lords: Military Commanders of the Twentieth Century.* Boston: Little, Brown and Co., 1976.

Chandler, Alfred D., ed. *The Papers of Dwight David Eisenhower. The War Years.* Vols.: I-V. Baltimore: The John Hopkins Press, 1970.

Churchill, Winston S. *The Second World War.* Vol. IV: *The Hinge of Fate.* Boston: Houghton Mifflin Co., 1950.

Coffey, Thomas M. HAP: *The Story of the US Air Force and the Man who Built it General*

Henry H. "Hap" Arnold. New York: Viking Press, 1982.

Eisenhower, David. *Eisenhower: At War 1943-1945.* New York: Random House, 1986.

Eisenhower, Dwight D. *Crusade in Europe.* Garden City: Doubleday & Com., 1948.

Hamilton, Nigel. *Master of the Battlefield: Monty's War Years 1942-1944.* New York: McGraw-Hill, 1983.

Hansell, Haywood S., Jr. *The Strategic Air War Against Germany and Japan: A Memoir.* Washington: Office of Air Force History, GPO, 1986.

Harmon, E.N. and MacKaye, Milton. *Combat Commander: Autobiography of a Soldier.* New York: Prentice-Hall, 1970.

Montgomery, Bernard L. *The Memories of Field-Marshal the Viscount Montgomery of Alamein.* New York: The World Publishing Co., 1958.

Parton, James *"Air Force Spoken Here:" General Ira Eaker & the Command of the Air.* Bethesda, Md.: Adler & Adler, 1986.

Pogue, Forrest C. *George C. Marshall: Organizer of Victory 1943-1945.* New York: The Viking Press, 1973.

Puryear, Edgar F. *Stars in Flight: A Study in Air Force Leadership.* Novato, CA: Presidio Press, 1981.

Smith, Walter Bedell. *Eisenhower's Six Great Decisions: Europe 1944-1945.* New York: Longmans, Green and Co., 1956.

Tedder, Arthur. *With Prejudice: The War Memoirs of Marshal of the Royal Air Force, Lord Tedder GCB.* Boston: Little, Brown and Co., 1966.

Truscott, Lucian K. *Command Decisions: A Personal Story.* New York: E.P. Dutton and Company, Inc, 1954.

Arnold's memoirs, although hastily written and poorly edited, are still superior to any biography yet written about him. Tedder, who knew Spaatz well, yields important information. Eisenhower's Papers are extremely valuable, especially if one is unable to make the hegira to Abilene, Kansas to check the originals. They must be used, however, with care for they have been severely edited, especially in regards to comments on personnel serving with or under him. Ambrose's biography of Eisenhower is probably the best military biography of the Supreme Commander. Alfred Goldberg's fourteen page article on Spaatz in *The War Lords* has long been the only published and reasonably widely available biography of Spaatz.

VII. MONOGRAPHS AND SECONDARY SOURCES

Bidwell, Shelford, and Graham, Dominick. *Fire Power: British Army Weapons and Theories of War 1904-1945.* London: George Allen and Unwin, 1982.

Overy, R.J. *The Air War 1939-1945.* New York: Stein and Day Publishers, 1981.

Terraine, John. *A Time for Courage the Royal Air Force in the European War, 1939-1945.* New York: Macmillan Publishing Co., 1985.

Winterbotham, F.W. *The Ultra Secret.* New York: Dell Books, 1979.

VIII. UNPUBLISHED MATERIAL

Mets, David. Untitled Manuscript Biography of Spaatz, 1982.

An edited version of Mets' work, under the title *Master of Air Power*, was published in 1988 by Presidio Press. This manuscript was particularly strong on Spaatz's pre-World War II career and benifited from the author's numerous interviews with Spaatz's family and associates.