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This paper will revisit many of the close air support issues, their geneses, their evolutions, there current status; and will reach some reasoned conclusions and recommendations. I have attempted to base these on historical lessons-learned and logic. However, let me "dispassionately" proclaim at the outset that close air support has been shortchanged over the years, we don't have the correct assets (nor or we looking to develop the correct ones) and our doctrine is fundamentally flawed.

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MILITARY STUDIES PROJECT

CLOSE AIR SUPPORT: BATTLE IN THE FOURTH DIMENSION

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USAWC Class of 1990

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ABSTRACT

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This paper will revisit many of the close air support issues, their geneses, their evolutions, their current status; and will reach some reasoned conclusions and recommendations. I have attempted to base these on historical lessons-learned and logic. However, let me 'dispassionately' proclaim at the outset that close air support has been shortchanged over the years, we don't have the correct assets (nor or we looking to develop the correct ones) and our doctrine is fundamentally flawed.



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CLOSE AIR SUPPORT: BATTLE IN THE FOURTH DIMENSION

CHAPTER I

INTRODUCTION

Long after the war is over, the smoke has cleared and the stench has faded away, the battle over Close Air Support continues. It's the battle of the fourth dimension - of roles and missions, of priorities and budgets, of innovation and narrow-mindedness - and it's been ongoing for over 70 years. Exactly what is close air support?

Close air support is defined by Joint Chiefs of Staff Publication 1 as "Air action against hostile targets which are in close proximity to friendly forces and which require detailed integration of each air mission with the fire and movement of those forces."¹

Most recently, the arguments concerning CAS have elevated to the Chairman of the Joint Chiefs of Staff, Secretary of Defense and the

Congressional levels. Although these levels of our bureaucracies have previously been involved, some new facets have arisen.

For the first time in the saga of close air support, both the Chief of Staff of the Army and the Chief of Staff of the Air Force are in agreement and have signed a joint memorandum to that effect. This memorandum was in response to an initiative by the then Chairman of the Joint Chiefs of Staff, Admiral William J. Crowe. Admiral Crowe prepared a report on the roles and functions of the Armed Forces as stated by title 10, United States Code, section 153 (b) (10 USC 153(b)), and amended by the Goldwater/Nichols DOD Reorganization Act of 1986. "The law directs the Chairman, Joint Chiefs of Staff, to submit periodically a report to the Secretary of Defense that contains recommendations for change in the assignment of function (roles and missions) to the Armed Forces that will achieve maximum effectiveness."² General Carl E. Vuono, Chief of Staff Army, and General Larry D. Welch, Chief of Staff Air Force, agreed with each other, but not with the Chairman.

Chairman Crowe felt that the traditional roles and missions of the Armed Forces had become blurred by the new technologies associated with air power (as will be shown later, the attack helicopter is a case in point). He bluntly stated that "CAS is not an issue for only the Army and the Air Force; based upon the definition of CAS in JCS Publication 1, all four services perform the CAS function."³ This is where the Chairman and the two Service Chiefs diverged. The report went on to state:

CAS for land operations was assigned to the Air Force when it became an independent service; and the Army was permitted to maintain organic aviation with

relatively unspecified tasks. Today the Army provides over 1400 rotary-wing aircraft for maneuver against enemy formations and organic fire support against targets that are in close proximity to friendly forces. Missions assigned to these aircraft include antipersonnel, antiarmor, air defense suppression, armed escort, and security. These aviation assets are closely integrated with the ground force commander's scheme of maneuver and are quickly responsive to him. Likewise, the Marine Corps fully integrates both fixed and rotary wing CAS aircraft into the combined arms concept... The difference between these modes of CAS is not only the type of aircraft used, but also the command and control relationship. Army aviation provides a quick response capability to the corps-level commanders and below, while Air Force assets provide the Joint Task Force Commander with the capability to concentrate air power at selected points across an entire theater... All four services have CAS-capable aircraft employed under joint doctrine.⁴

The Service Chiefs felt that the Chairman's definition of CAS was too broad. Their position was that both the Army and the Air Force "define CAS as being performed by fixed wing aircraft."⁵ This position was further expanded upon in another joint memorandum.⁶

The Army and the Air Force do not today regard attack

helicopters as CAS weapons systems. Attack helicopter units lack the speed, lethality and flexibility to enable the theater commander to mass, concentrate or shift air support intratheater which is a vital characteristic of CAS...Attack helicopters were designed as integral elements of the ground commander's organic combat power. Operating at corps level and below, attack helicopter units participate in the full range of Army offensive and defensive missions. Air Force aircraft also provide responsive support in close proximity to troops for commanders at corps level and below. However, because of their inherent flexibility, capability and wide array and density of munitions, they provide the theater commander an ability to mass across an entire theater which cannot be achieved by attack helicopter units...This is why we have always carefully defined CAS as a function performed by Air Force fixed-wing aircraft.⁶

The logic here appears to be one of how quickly a fire support asset moves around the battlefield, or theater, and therefore how well it can be massed. This has little to do with the literal definition of CAS which simply implies fire support, in close proximity to friendly troops, delivered from an aerial platform. However, the disagreement between the Services and the Chairman was no doubt exacerbated by Congressional interest.

The "Defense Authorization Amendments and Base Closure and Realignment Act," of September 1988, directed the Secretary of Defense to (1) assess the feasibility of transferring the CAS mission from the Air Force to the Army; (2) develop an operational test plan for competitive fly-off of alternative CAS aircraft; and (3) conduct an independent assessment of close air support alternative aircraft studies. Both the Army and the Air Force object to the transfer of the CAS function and both Service Chiefs support the development of the A-16 (a derivative of the F-16) as the new CAS aircraft. As previously mentioned, this agreement by the two Chiefs concerning CAS is one of the few that I can find since the Air Force officially separated from the Army.

Interestingly enough, my research could find no one at Fort Rucker, the Army Aviation Center, who provided any input to the Army Staff on the above positions. Most probably, this extremely sensitive issue was handled at a very senior level. Discussions with Headquarters, United States Army Training and Doctrine Command, indicate a restricted role also. Further, part of the rationale for the Army's position was the perception that the role shift from the Air Force to the Army would have simply meant a transfer of the A-10 people and assets from one service to the other. This obviously would have been counter-productive, but more importantly, this is simply a surface issue which does not deal with the fundamental issues of close air support (more about this later). On the other hand, Tactical Air Command Headquarters was a key player in the development of the Air Staff's position and my contacts there were exceptionally well informed. The not so subtle implication here is that the Army's position is, in this author's opinion,

short-sighted and, as such, will impede the development of the best options for doctrine and equipment.

Another factor which complicates the CAS debate has already been alluded to - this is the development of Army aviation and the attack helicopter. For whatever reasons, aviation within the Army has always been somewhat of a step-child. In the following chapter which discusses the history of CAS, it will be fairly easy for the reader to make some generalized inferences concerning the Army's prejudices about aviation. However, these are beyond the purview of this paper. Suffice it to say that history definitely shows certain pains for aviation, within the Army, which may have contributed to the out-of-hand rejection of CAS as a basic Army role.

ENDNOTES

1. Department of Defense, Joint Chiefs of Staff Publication 1, p. 70.
2. Admiral William J. Crowe, Chairman Joint Chiefs of Staff, "Roles and Functions of the Armed Forces", Report to the Secretary of Defense, 28 September, 1989, p. ii.
3. Ibid., p. 10.
4. Ibid., pp. 10-11.
5. General Carl E. Vuono, Chief of Staff Army and General Larry D. Welch, Chief of Staff Air Force, Joint Memorandum for the Chairman Joint Chiefs of Staff, Subject: "Close Air Support", 14 September 1989.
6. General Carl E. Vuono, Chief of Staff Army and General Larry D. Welch, Chief of Staff Air Force, Joint Memorandum for the Chairman Joint Chiefs of Staff, Subject: "Close Air Support", 11 October 1989.

CHAPTER 2

HISTORY OF CAS AND LESSONS LEARNED

On 17 December 1903 the Wright brothers introduced a technology which forever after would alter both peaceful and warring aspects of mankind. The military, however, was slow to understand or appreciate the warfighting applications of aviation.

On 1 August 1907 the Army Signal Corps established an Aeronautical Division to "Take charge of all matters pertaining to military ballooning, air machines, and all kindred subjects;" and, in 1914, Congress created the Aviation Section of the Signal Corps on a permanent basis.¹ A report titled "Close Air Support History," done by the Army Close Air Support Requirements Board in 1963, states that, at the outset of World War I, Army Aviation consisted of 131 officers, 1087 enlisted men and fewer than 250 airplanes (all of which were considered trainers by European standards).² According to the author Kent Roberts Greenfield, doctrine did not exist and the basic role of aviation was to "serve as the eyes of the ground force and to shoot out the eyes of the enemy."³ The war changed a lot of notions concerning aviation. Technology advanced dramatically.

Before the war had ended there arose many divergent opinions concerning the organization of aviation forces. "As early as March 1916, the first of

a long series of bills supporting a separate Air Force was introduced in Congress. Between that date and the National Security Act in 1947, some 50 similar bills were introduced."⁴ Secretary of War Baker and General Pershing did not agree with the concept of a separate air service. Black Jack stated that "An air force acting independently can of its own account neither win a war at the present time nor, so far as we can tell, at any time in the future."⁵ Congress agreed. But in 1920, the Air Service was recognized as a combat arm of the Army in the Army Reorganization Act. <It's interesting to note that it would take from 1947 until 1983 for aviation to once again be officially recognized as a combat branch of the Army.>

However, following World War I, doctrine concerning air power began to emerge. The CAS study of 1963, already cited, references James L. Cate's book Development of US Air Doctrine, which references a 1923 revision of the Field Service Regulations. "The ultimate object of all military operations is the destruction of the enemy's armed forces by battle. Decisive defeat in battle breaks the enemy's will to resist and forces him to sue for peace... (1) Victory requires cooperation between air and ground forces; (2) No one arm wins battles, but the coordination principle underlying the employment of the combined arms is that the mission of the infantry is the mission of the entire force; (3) The special missions of the other arms are derived from their power to contribute to the execution of infantry missions; (4) the chief role of aviation is close air support."⁶ Thus it is easy to see the growing rift between air power enthusiasts and those traditionalists who could only see aviation in a minor supporting role.

In 1925, the Morrow Commission considered the issue of a Department of Defense and, as part of its study, recommended a separate air department. Congress did not combine the War Department and the Navy Department at this time, but it did inaugurate the Air Corps formally on 2 July 1926.⁷ Doctrine continued to evolve with the publication, by the War Department, of TR 440-15, Employment of the Air Forces of the Army, 15 October 1935. This document emphasized reconnaissance, interdiction, harassment and deep attack.⁸

By the time the United States entered into World War II, air oriented doctrine, as opposed to ground doctrine with air support, was in evidence. The War Department published Air Corps Field Manual 1-5, Employment of the Aviation of the Army, on 15 April 1940. The manual stated that "complete control of the air can be gained and maintained only by the total destruction of the enemy's aviation. Since this is seldom practicable, counter air operations must be carried on progressively and intensely to provide security from hostile air...Support aviation generally is a theater of operations weapon...Combat aviation must be employed intensively against objectives of decisive importance and not dispersed or dissipated in other operations."⁹

On 20 June 1941 the War Department established the Army Air Forces. Shortly thereafter the emergence of the over-riding necessity for air superiority was institutionalized with FM 11-15. Air superiority implies both freedom of operation of our own air forces and freedom of our ground forces from enemy air attack. Air superiority is irrefutably logical, difficult to achieve in many scenarios, but as will be seen, seems to take

on such a level of importance as to completely overshadow close air support. This publication clearly placed CAS as a secondary mission behind air superiority (and, to some degree, interdiction).¹⁰

The doctrine was in place for our initial efforts in the war; however, our early experiences in North Africa showed that we weren't well schooled in joint operations and we didn't do well in following our doctrine. The Tunisia Campaign would be used by both ground and air advocates to prove their positions correct. On the one hand the ground commander wanted decentralized control for immediate response. On the other hand the air advocates felt that air assets should be under centralized control at the theater level. They further felt that interdiction was more valuable than close air support engagements.

The 1940's manuals emphasized air superiority and that CAS should be used against objectives which ground assets could not well engage. They further stated that joint air-ground operations hinged upon close coordination and centralized control of air assets.¹¹ For a number of reasons, North Africa was a dismal experience for all our armed forces.

General Eisenhower was displeased with both the ground and air performance in Tunisia. He brought in Air Marshall Tedder and gave him great latitude in correcting the air support problems. By the time our forces had moved into the Mediterranean we were performing much better. It's hard to quantify how much of the improvement was attributable to structural changes implemented by Air Marshall Tedder as opposed to the improvements evolved through battlefield experience. Regardless, improvements did come.

Two different views on air power in North Africa follow.

Assistant Secretary of War John McClow - It is my firm belief that the air forces are not interested in this type work <CAS>, think it is unsound, and are very much concerned lest it result in control of air units by ground commanders. Their interest, enthusiasm and energy are directed to different fields...What I cannot see is why we do not develop this auxiliary to the infantry attack even if it is of less importance than strategic bombing. It may be the wrong use of planes if you have to choose between the two but to say that airpower is so impractical that it cannot be used for immediate help of the infantry is nonsense and displays a failure to realize the air's full possibilities. It is just as bad as was the tendency of the ground forces, some time ago, to confine air operations to such work.¹²

General Laurence S. Kuter, USAF, had this to say.

Tactical air units were parceled out among the ground forces, and so scattered that their inherent flexibility and mobility were lost. Fighters were used almost wholly in local defensive cover and the capability of those air forces to strike the enemy was ignored. No use was made of opportunities to take the initiative. The air forces were tied to the

local interests of divisions and corps, and no attention was given to the task of winning control of the air or assisting the theater as a whole.¹³

Air Marshall Tedder was a staunch believer in air superiority and interdiction. He stated, "My experiences in the Mediterranean convince me of the high importance of rail communications as a target for air attack while Unity of Command gave us concentration at the right place and point in time."¹⁴ The combined arms team (air/ground) fared much better in the Mediterranean than it had in Tunisia. Coordination between the air campaign and the objectives of the ground commander matured during the move up the Italian peninsula.¹⁵ Joint operations were ready for the challenge by the time of the Normandy landings.

Doctrinal changes occurred in the field faster than they were documented in manuals. However, manuals did get updated and continued to chronicle the changing relationship between the Army ground forces and the Army air forces.

FM 100-20, Command and Employment of Air Power, was published on 21 July 1943. It stated unequivocally that land power and air power were "co-equal and interdependent forces; neither an auxiliary of the other."¹⁶ Mission priorities were clearly stated as (1) air superiority, (2) "prevention of movement of the enemy or his supplies into the theater of operations and/or within the theater," and (3) "participation in combined effort of air and ground forces in the battle area to gain objectives immediately in front of the ground forces." Close air support seemed to be steadily losing ground. This manual further documented the difficulties

associated with striking targets "in the zone of contact." It's obvious that the authors were much more kindly disposed to air interdiction missions than to close-air-support. Many of their objections to CAS are valid and remain so today. It is difficult to spot small targets and to differentiate friendly from enemy when they are in close proximity. Men, trucks, or tanks may not seem like very significant targets in the grand scheme of war when viewed from the cockpit. But they take on vital importance when viewed from a fighting position about to be over-run.

There is no doubt that air superiority paved the way for Operation Overlord and that its success is also largely attributable to the air interdiction effort. It is somewhat tragic however, that the United States, at the height of its wartime industrial power, did not provide enough air assets for dedicated close air support. The statistics, as detailed in a 1963 study, are surprising. Twenty-four percent of the 489,069 sorties flown between D-Day and the end of the war in Europe were close air support. Only eighteen percent of the total fighter sorties were CAS.¹⁷

The Far East Command experienced a somewhat different sortie mix. Over sixty percent, or 128,614 out of 207,233 sorties, were CAS. These were flown during the period January 1944 through April 1945.¹⁸ Some speculate that this higher percentage was due to the greater involvement of Marines and their dedicated air support.

Regardless of one's orientation or predisposition, air power had proven itself to be a vital member of the combined arms. Many opinions still abound concerning the contribution and role of strategic bombing, but that subject will be left for another study.

Immediately following the war a lot of thought went into both the structure of our armed forces and the respective roles and missions. In a period of less than 40 years, air power had become near independent from the Army (it would soon become totally so) and close air support had fallen from favored son status to third fiddle, which most experts feel is the proper mission hierarchy. General Omar Bradley chaired a committee in 1946 which reached several conclusions. Among these was a recognition that better night air intruder activity was necessary. Additionally, the report stated that the position held by some that aircraft should not be used to strike targets which could be ranged by friendly artillery was unsound.¹⁹

Other post-war studies concerning CAS further documented the different perspectives. LTC Lytle Perkins, USAF, reported in 1962 that ground commanders were dissatisfied with CAS in World War II for a variety of reasons. The most prevalent seems to have been that ground commanders would request missions that air commanders regarded as unprofitable.²⁰ Also, "American ground commanders...never had been satisfied with their air support. They generally hoped that the air units needed for support in critical operations could be put under control of Division Commanders."²¹ Another complaint was that the Air Force planners were usually more intent on distant objectives and, for this reason, were designing and procuring speedier aircraft, making it more difficult for pilots to recognize targets and engage in the close air support role. Air commanders generally felt that ground commanders were myopic in their outlook and were hobbling air power through their incessant objections to centralization of control.

The National Security Act of 1947 ended one phase of controversy by

establishing both the Defense Department and an independent Air Force. The Army Air Corps gained full autonomy on 18 September 1947 and the Army became the only service without organic aerial fire support. The Key West Agreement of 1948 further defined the roles and missions of the three service departments. Actually, Secretary of Defense Forrestal was unable to achieve closure with his civilian and military advisors at Key West. He subsequently held a follow-on meeting at Newport, Rhode Island, in August of that same year. It was here that consensus was actually reached. Regardless, the results have always been referred to as the Key West Agreement. The President accepted the results of this agreement and directed publication of a new functions document which is today Department of Defense Directive 5100.1, Function of the Department of Defense and its Major Components. The provisions of this document are found in Joint Chiefs of Staff Publication Two (Unified Action Armed Forces {UNAAF}). These references tasked the Air Force with the responsibility to "furnish close combat...support to the Army." The definition of CAS, as previously stated in this paper, has remained fundamentally unchanged over time.

After World War II the United States found itself in the unaccustomed role of leader of the free world vis-a-vis the growing aggressive tendencies of the communist world, led by the Soviet Union. As polarization advanced and the Cold War began we were the sole possessors of "The Bomb". These factors, coupled with our predictable penchant for rapid demobilization following conflict, brought shrinking defense budgets and a predilection by the populace towards isolationism (eg., bring the boys home). The growing battle for the budget dollar saw the emergence of the Strategic Air Command

and its "getting the lion's share" of the budget at the expense of the Tactical Air Command.²² As a result, the Korean War began on 15 June 1950 without any close air support program in existence. "At the outset of the first combat test since World War II, there was no working CAS program."²³

Once again we found ourselves with ineffective CAS operations at the beginning of a war. Not only were our forces poorly prepared from a service perspective, but all of the joint lessons from the last war appear to have been forgotten. Coordination, command and control were woefully lacking and there were no forward air controllers available. Differentiating between targets was no less easy in 1950 than it had been in 1944. The FAC problem was resolved by placing controllers in small Army liaison airplanes and using them for spotter/controller functions. "From the first day they flew over Korea, Mosquito controllers proved their worth. Their primary duty was to control air strikes against enemy targets and provide an additional set of eyes for the ground commander."²³

General Ridgeway, the United Nations commander, said this:

Our efforts to speed up and improve the use of Air Force planes in close support met with a less cooperative attitude because of policy decisions in Washington. Though I strongly advocated that some small part of the combat aviation available be assigned to Headquarters Field Army and its corps, so that air strikes could be called with a minimum of delay, Air Force adamantly opposed this plan. Requests for air strikes continued to follow the old merry-go-round,

up through channels to Army, and down again. Frequently, as a result of this time consuming procedure, when the planes got there the enemy had gone.²⁵

Lieutenant General John R. Hodge amplified this view:

...it is quite apparent that optimum efficiency in the application of tactical air power in support of the ground forces cannot be obtained under presently agreed doctrine of cooperation as set forth in FM 31-35...Retention of centralized control of tactical air at the highest levels, as manifested in the JOC itself, exemplifies the problem which confronts us under a parallel command structure which precludes the desired objective of further simplifying the procedures of the air-ground operations system.²⁶

There were certainly dissenting views. General William W. Momyer, USAF, Air Power In Three Wars (WWII, Korea, and Vietnam):

The Korean War once again demonstrated the need for a command and control structure that did not arbitrarily divide air forces between geographic sectors, but provided air power when and where these forces were needed most. The command structure had to be capable of using airpower in a variety of tasks simultaneously or in sequence.²⁷

Although CAS operations were ineffective during the initial stages of the Korean War, by the last two years about thirty percent of all sorties

flown were close-air-support.²⁸

Obviously, the differences between the ground component perspective and the air component perspective had not changed during three wars and the intervening years. The fundamental issue can be reduced to: Who should control tactical air, specifically close air support?

Following the Korean War American foreign policy underwent a number of changes which influenced military doctrine and hardware. The Eisenhower administration was faced with perceived Soviet parity and moved toward a 'new look,' away from the Truman concept of 'containment.' Eisenhower gave way to Kennedy, whose 'flexible response' and concern for the emerging third world countries paved the way for our involvement in Vietnam. This would be the next proving ground for close air support.

Kennedy was vitally interested in counter-insurgency operations and directed OSD to develop innovative ways to cope with it.²⁹ This brought about the Advanced Research Project Agency (ARPA) which did testing in Vietnam with the Joint Evaluation Group. Concurrently, the Army was becoming increasingly interested in rotary-wing aircraft, which had really started to evolve from its introduction in combat during Korea. This interest stemmed from the Army's view that counter-insurgency was primarily an Army function and thoughts that the helicopter would dramatically improve mobility of forces. The Air Force considered helicopters too vulnerable.³⁰

Almost simultaneously with these events, Continental Army Command (CONARC) had requested the Army Command and Staff School to do a study on CAS. This study concluded that:

> CAS joint operational planning should be de-

centralized to the field army-tactical air force level or to the independent corps.

> Allocated CAS must be adequate to meet the requirement.

> Air units allocated to the close support mission must be under operational control of the supported Army force commander.

> Air units designated to support CAS must be equipped with aircraft designed for ground attack as a primary mission.³¹

In 1962 the Army established what would become known as the Howze Board. This was done in response to Secretary of Defense McNamara's directive, of 19 April 1962, to "develop a plan for implementing fresh and perhaps unorthodox concepts which will give a significant increase in mobility."³² This board created the air assault division and recommended that a number be integrated into the force structure. The air assault division was to have organic helicopters for airlift, fire support and reconnaissance. This was proposed with the knowledge that in 1959 the Joint Chiefs of Staff had charged the Air Force to develop doctrine and procedures for CAS.³³ From this humble beginning was to emerge the helicopter gun-ship and what would become known as aerial rocket artillery (ARA) - which was simply close air support.

These developments were in direct conflict with the Key West Agreement and were vehemently opposed by the Air Force. The Air Force started its own study, referred as the Disosway Board, which refuted the Howze Board

proposals by stating that the concept couldn't survive in a high threat environment.³⁴ These arguments were supported somewhat when in January 1963, a helicopter assault against an undetected battalion of Viet Cong resulted in 66 friendly KIA's. "CINCPAC, Admiral Felt, directed all future helicopter assaults have fixed-wing support."³⁵

Why, at the start of another war, did both the supported and the supporting services for close air support, appear to once again be at loggerheads? A report by a special sub-committee of the Committee on Armed Services, House of Representatives, 1961, sheds some light.

> Perhaps the most appalling fact which came to the attention of the subcommittee was the fact that until recently the Air Force, which has the responsibility for providing close air support to the Army on the ground, could not talk to the Army on the ground because their radios were not compatible.

> (Concerning FAC's) Again it seems strange to the subcommittee that the Air Force should claim as a new tactic and a new technique developed in Vietnam, a technique which had been used in Korea, and it seems even stranger that the AF had to go to the Army in order to get the planes required to do the job which the AF pilots described as necessary.

> General McConnell, Air Force Chief of Staff, testified that the best plane we had for the job of close air support was the A-1. It is interesting

to note that the A-1 was acquired from the Navy.

In testimony, the AF stated that it did not have a plane with similar ground support capabilities as the Navy A-6, which was developed to support the Marines (night/bad weather capable).³⁶

In Vietnam, the FAC was critical because there was no traditional forward edge of the battle area (FEBA). Additionally, in most cases the pilot could not see his target due to terrain and/or vegetation. He was dependent upon the marking of his target by someone else.³⁷ Interdiction was again a major effort, with results once more hard to quantify. CAS and its effectiveness may also have been oversold. Statistics show that during the Tet offensive of 1968, it required some 24,000 tactical air sorties and 2700 B-52 strikes to stop two North Vietnamese divisions around Khe Sanh.³⁸ This last fact is not so surprising when related to similar data from WWII, and the 1973 Arab-Israeli War. A study concluded that "approximately 30 aircraft sorties are required to destroy a tank, and about five tons of ordnance is expended for every soldier killed."³⁹ Regardless, to the grunt on the ground, timely, effective close-air-support cannot be oversold.

During Vietnam and immediately thereafter, the Army felt stronger than ever about close air support issues. It initiated, developed and fielded the AH-1 attack helicopter, which was the first pure combat helicopter. It also began the development of the Cheyenne, which would seriously challenge the capabilities of fixed-wing aircraft. This brought the roles/missions conflict to a head and some authors believe that the Army agreed to cancel the program in exchange for the Air Force fielding of the A-10, our first

dedicated close air support aircraft (see quote on pages 34-35).

Vietnam was our last extensive 'field experiment' in close air support. The Israelis have significant experience in a true mid-to-high intensity environment. In fact, one of our recent Under Secretaries of Defense is quoted as having said, "The Israelis have given up on fixed-wing aircraft for CAS and are doing it with helicopters. I'm not ready to do that, but we have a problem."⁴⁰ The Soviets gained a lot of CAS experience in Afghanistan, but not much data are available.

Equipment and doctrine continued to evolve following Vietnam. The attack helicopter became a lethal maneuver element, and Army Aviation became a branch. The Air Force trained hard with the ground component in the joint application of the A-10 and the attack helicopter. AirLand battle and its axioms of agility, initiative, depth and synchronization became the way to fight. These developments will be viewed in relationship to close air support during the next chapter when we discuss the problems with CAS today.

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CHAPTER 3

CLOSE AIR SUPPORT TODAY

AirLand battle has changed the way the Army will fight and has resulted in both force-structure and doctrinal changes. The traditional conflict between NATO and the Warsaw Pact on the plains of Europe appears to be less likely each day as the Communist empire crumbles. Most strategists still feel that Europe needs to be a center-piece of our foreign policy. However, the Army must definitely look at smaller wars (regional conflicts at the lower end of the spectrum) and the application of AirLand battle in these scenarios. We will certainly have a smaller force, less forward presence, and must therefore be more mobile and flexible than ever.

AirLand battle, with its emphasis on synchronization and shaping the battlefield through strikes against follow-on forces, has re-ignited the conflict between close-air-support advocates and those for air interdiction. These, along with the shrinking budget, are reasons that the warfighting CINCs want dual role aircraft. At the theater level, they both want and need the flexibility to mass across a wide front, and to strike deep. Unfortunately, this is often viewed as an either/or situation. Given that air superiority is an over-arching consideration, and that the CINC needs

to be able to do a variety of tasks with his air arm, where does this leave the grunt?

As stated by a report of the United States Congress:

We are aware that our Air Force has the responsibility of providing the nuclear deterrent... is also responsible for maintaining air superiority...the Air Force also has the mission of providing close air support for our Army on the ground...While we honor the Air Force for its accomplishments in the strategic field, in the field of air superiority...we feel that in its magnificent accomplishments in the wild blue yonder it has tended to ignore the foot soldiers in the dirty brown under.¹

This is an old quote but expresses a recurring concern, "Will they be there when we need them?" As currently organized, only the CINC knows the answer to this question, as he is the one who establishes the priorities and directs the allocation of resources.

A more recent opinion on close air support was expressed by Colonel Melvin Greene, USAF, in 1988. "...an effective close air support capability is apparently (once again) a casualty of peacetime demobilization...Other Air Force missions seem to enjoy more consistent advocacy and support."² This sort of statement by a blue suited CAS expert does not build confidence in a green suited CAS user.

Having implied many areas of concern in the role of close air support,

let's look at some issues in more depth. First, some doctrinal statements.

FM 100-5 incorporates the new concepts of AirLand battle with the old axioms of Clausewitz and others. Mass, maneuver, and synchronization take on new nuances today. Concerning tactical air operations, FM 100-5 states: "The success of both offensive and defensive operations can depend greatly on massing airpower at decisive points...Close air support can enhance counteroffensive actions by creating opportunities to break through enemy lines, protecting the flanks of a penetration, or preventing the counter maneuver of enemy surface forces. Defensive requirements to blunt an enemy offensive may also dictate the need for close air support. CAS can protect the maneuver and withdrawal of land forces, protect rear area movements, or create avenues of escape."³ This is all prefaced, however, by the acknowledgement of the primacy of air superiority. "The first consideration in employing air forces is gaining and maintaining the freedom of action to conduct operations against the enemy. Control of the air environment gives commanders the freedom to conduct successful attacks which can neutralize or destroy an enemy's warfighting potential."⁴ Thus, doctrinally, the Army has agreed to the subordinate role of close air support, and rightfully so if it must be an either/or situation. A dual role aircraft, and centralized control make this conflict both inevitable and frequent.

Air Force Manual 1-1 says that "The first consideration in employing aerospace forces is gaining and maintaining the freedom of action to conduct operations against the enemy."⁵ This is an obvious truism which only impacts negatively on CAS if the same assets are being used to provide both functions. Fiscal constraints might then be argued to support a dual role

aircraft.

Another impact of AirLand battle has been the emphasis on follow-on forces, which argues for air interdiction. Air interdiction is defined by JCS Publication 1 as "air operations conducted to destroy, neutralize, or delay the enemy's military potential before it can be brought to bear effectively against friendly forces at distances from friendly forces that do not require detailed integration with the fire and movement of the friendly forces."⁶ This implies action beyond the Fire Support Coordination Line (FSCL) because any engagement out to that line must be coordinated with the ground commander.

Battlefield air interdiction is a subset of air interdiction which has evolved in the relatively recent past. It is air interdiction against targets which are in a position to have a "near-term" effect on friendly forces, and which therefore, require joint coordination and planning.⁷ This implies action within the FSCL. Also, with the corps' ability to strike deep using the attack helicopter, BAI assets and attack helicopters may conflict at deeper ranges.

As seen earlier, air power proponents have historically viewed interdiction as the better use of aircraft over close air support. The complexities of AirLand battle, when viewed from the big picture, tend to support such an assessment. Besides, many argue that close air support is not a survivable mission in the mid-to-high threat spectrum. The proliferation of shoulder-fired anti-aircraft weapons and the sophisticated array of air defense forces make CAS risky, especially when the targets may be difficult to spot vehicles or troops.

"While hardly anyone believes that an excellent CAS capability would substitute for the need to perform BAI, it seems that many are prepared to accept that adequate BAI would obviate the need for CAS. This belief is very convenient since a viable CAS capability seems to be so much more difficult to field, but I believe we need both capabilities."⁸ This elegantly states the dilemma. Considering that NATO lacks the assets to provide large numbers of effective CAS sorties, and considering that the Warsaw Pact still holds significant advantages in ground forces, our AirLand battle may be in trouble if the balloon goes up. In the last Arab-Israeli war, the Israelis "felt that they had no choice but to support their army despite high aircraft losses."⁹ Similarly, we may not be able to stop the Soviets without doing CAS to save the situation and therefore accept high aircraft losses. The smart solution would be to figure better, safer methods of employing CAS (Chapter 4). Regardless of whether one feels that AI, BAI, or CAS is the best use of aircraft, we could be forced into employing CAS in Europe.

Close air support targets are another issue today. Target acquisition has always been difficult from the cockpit. With the high threat mandating low altitudes and quicker aircraft, with the fluid aspects of AirLand battle doctrine, modern smokes and obscurants, and the normal procedures of camouflage and dispersion, the typical targets for CAS will be even harder to spot. This is complicated by the question of the forward air controller. Pilots generally feel that the FAC is an indispensable element for effective CAS. If the CAS platform itself has doubtful probability of survival, how about the FAC?

By definition, CAS targets are designated by the ground commander. Obviously, ground commanders need to be well schooled and savvy in their CAS requests. They need to know the capabilities and the limitations. But there are times when the targets required by the ground commander may not be the ones preferred by the pilot. The imperatives of METTT (mission, enemy, terrain, friendly troops, and time) should be the guiding tenets.

How about aircraft design? I find it astonishing that the Army is supporting a dual role aircraft for the A-10 follow-on. Our history to this point has always been to demand a single role aircraft. Throughout years of extensive dialog, the Army "has generally focused on operational requirements for CAS and deferred aircraft design to the Air Force."¹⁰ Until 1985, numerous Army studies, conducted over 40 years, concluded that a simple, single-mission aircraft, rugged, reliable, easily maintained, and capable of immediate response in the battle area was the requirement.¹¹ This was changed in 1985 when a joint memorandum was signed by both service secretaries, agreeing to a dual role aircraft (primarily designated CAS, with a BAI capability). In years past, the Army had "been hesitant to demand better air support...essential problems have been swept under the rug."¹² For the new aircraft (A-16), the Army has been directed to play a role in the requirements development.

Above all, the primary characteristic which the Army has sought in a CAS aircraft is responsiveness. This can be achieved in a number of ways. Aircraft can loiter until called into action. This is both expensive and risky. Speed has been the solution for Air Force planners. Unfortunately, this has resulted in emphasis on air performance and little concern for

basing requirements. Another solution could be stationing aircraft in close proximity to the front. However, due to the basing requirements of our current aircraft, this is infeasible.

The F-16 and similar aircraft need extensive maintenance facilities and long, clean, smooth runways and taxiways. This negates responsiveness inherent in basing close to the front and calls into question base survivability. Especially considering our probable reduction in forward deployed forces and the probability of deploying to theaters without fixed bases nearby, the airplanes of today are, by design, not responsive.

In most cases, CAS has been a reactive rather than a proactive mission. This makes responsiveness all the more important. If the aircraft can't get there quickly, the target and hence the opportunity to make a positive difference may have disappeared. Base survivability and responsiveness must therefore be major concerns today.

Wing Commander Jeremy G. Saye said the following.

Rapid response or "alert" sorties may be either ground or airborne alert...On balance, most NATO planners accept that airborne alert wastes scarce resources and may be an additional burden to an already overloaded C3 system. The primacy of ground alert is generally conceded as best... but NATO has been slow to recognize the need for forward operating bases...Tacair must be able to disperse its aircraft to FOB's and operate effectively therefrom. The fact that RAF

Harriers have successfully demonstrated this concept for the past ten years seems to be conveniently overlooked by those seeking to justify their own entrenched positions."¹⁴

The AirLand battle is going to proceed, rain or shine, day or night. The Air Force does not have, nor has it ever had, a cost effective, all weather, day/night CAS platform. The LANTIRN system is very expensive and there are too few. In all fairness I must recognize the awesome capabilities of the AC-130. Although this aircraft is not a CAS asset in the traditional sense, it is a phenomenal system for use in a benign environment. The Navy, on the other hand, has had this capability since the days of Vietnam with its A-6 Intruder. This system is old and does not meet the needs of today. But, it shows that the Marines have enjoyed for decades a capability which has been recognized as necessary (as cited in chapter 2 in the Bradley study). Why hasn't the Air Force made better progress in this area? Perhaps what the Congressional Committee found in the 1960's is still true. "When funds are limited, first things must come first. Unfortunately, close air support did not have the urgency of airlift, or interceptor roles, or strategic bombing in Air Force planning."¹³

Facts indicate that the only reason the Air Force finally developed a dedicated close air support aircraft was the Army's growing involvement with helicopters. "Recognizing the threat that Cheyenne posed to its CAS mission, the Air Force reversed its position, gave up its demand for a multi-purpose aircraft, and adopted, instead, the production of a dedicated

CAS aircraft. As a result, the Cheyenne program was terminated, the Army got its dedicated 'mud fighter,' and the Air Force retained its CAS mission."¹⁵

Command and control for close air support is extremely complex and therefore vulnerable. This stems primarily from the levels at which CAS must be tasked and allocated. It also contributes to the inherent lag between mission requests and time-on-target. C2 would be a complete study in itself. Suffice it to say that if this requesting, tasking and allocation system could be shortened, it would enhance responsiveness. This could be done by giving the CAS assets to the user (the corps commander) and keeping those dual role, theater assets, at the air-component/CINC level.

CAS is a critical player for the tactical level ground commander. Just as attack helicopters are key maneuver elements for Army offensive and defensive operations, so should be a capable and responsive fixed-wing CAS asset. As Assistant Secretary of War John McCloy said (cited in chapter 2), "[CAS] may be the wrong use of planes if we have to choose between the two [CAS vs bombing]." Warfighters should not, as a rule, have to choose. It's logical to field CAS assets with the centerpiece AirLand battle element (the corps) and leave the more flexible aviation systems with the theater commander. History has repeatedly shown that appropriate investment of warfighting capabilities during peacetime is much cheaper than last minute investment during wartime. Let's not sacrifice the soldiers of tomorrow for false economies today.

This discussion leads nicely into chapter 4, my recommendations.

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CHAPTER 4

CONCLUSIONS AND RECOMMENDATIONS

There are obviously many conclusions and recommendations which could be made from the preceeding discussions. There are a number of workable options. I have chosen those which I believe to be in the best interests of our military forces, as a whole, as we enter a period of significant change in the world. This is the time for innovative and far reaching changes. The realities of the threats we will face and the force structure we can afford mandate that we bury our narrow parochialisms and concentrate on the greater good.

The first and most fundamental conclusion which I will offer is that close air support is a necessary mission which must be supported across the spectrum of potential conflict. From the tactical to the operational levels of war, tactical air power needs to be viewed differently. Whether it be fixed-wing or helicopter, CAS cannot be relegated to a tertiary, or lower level, function. Rather than competing with air superiority or AI, CAS is

vital enough to be a stand alone function, and should be resourced as such. It should be planned as an integral element of maneuver and fire support. The ground commander should view it as an available asset for use offensively, in economy of force, and not just a last minute defensive bail-out. In order to do this, the CAS asset must be available and responsive.

I propose that the Corps Commander be given control of all the assets to fight within the boundaries of his area of operations, out to the Fire Support Coordination Line (FSCL). In the Army of the future, the Corps is going to be that fundamental contingency force and self-sustaining deployment element which will meet our needs in place of forward deployed forces and built up bases. By giving this commander control of the CAS assets, he will be able to better integrate them into his scheme of maneuver and fires. This will reduce the C2 problem and will therefore make CAS more responsive.

I do not propose transferring the Air Force close air support structure to the Army. I recommend that we task organize our corps as joint task forces with dedicated Air Force CAS components. These need to be re-equipped however, and the A-16 isn't the answer; nor is the helicopter alone. The A-10 may not survive in the European scenario, but it has great application in lower intensity conflicts. What sort of CAS platform do we need?

Our attack helicopters are a good start. With the Apache we have a lethal and survivable, all weather, day/night platform. It is capable of performing cross-FLOT operations and is already in the force structure. However, I think that the helicopter is best when complimented by the

strengths of a fixed wing aircraft.

For years the British and the United States Marines have had great success with the AV-8 Harrier V/STOL airplane. This technology has matured tremendously since the introduction of the aircraft. With the latest updates it provides a significant capability.

The Harrier can lift substantial loads from forward, unimproved bases with its short takeoff ability. Its speed approaches Mach 1, which means that it has the sprint capability to rapidly traverse a corps area and which also means it has better survivability. It is an extremely quick airplane with small radar and visual cross sections. With modern updates it can be made all weather and day/night capable. Target acquisition and navigation systems would be the most demanding aspects of upgrading the Harrier. The global positioning system (GPS) would assist here. However, with the development of imaginative munitions, such as scatterable area mines (and other such things), the need for spotting typical targets, like the tank, would be lessened.

The Harrier can be dispersed just as we disperse our attack helicopters. It could utilize the same forward area rearm/refuel (FARP) sites, and our aviation units could easily be altered to co-habitate with this asset.

The AV-8 may not be the panacea, but I strongly feel that the corps needs its own CAS assets and that we need both helicopter and fixed-wing. The fixed-wing gives greater speed and heavier loads, but it needs to be able to deploy to the field near where the fighting will take place. One of the big lessons from the tactical air forces in World War II was that they

moved with the forces they supported. None of our present support aircraft can do that, and the A-16 will be no different.

"The USAF tends to 'damn with faint praise' the Harrier concept- often, it is felt, from a position of ignorance and prejudice... NATO has been slow to recognize the advantages of STOL and short takeoff and vertical land-capable aircraft and has thus immensely complicated, if not defeated its dispersal options."¹ We need to open-mindedly pursue the V/STOL options.

Consider how complicated our airspace command and control is in and around the FLOT. If the corps commander 'owned' all the assets that would operate in his airspace (under normal conditions), this problem could be simplified. This will be especially important during the decentralized combat operations envisioned by AirLand battle.

Since we will always be fiscally constrained, the CAS role will always be placed in jeopardy when it must compete at the CINC level with air superiority and other missions. Given that CAS is necessary, let's give the assets to the fighter who needs them. Granted, there still will not be enough assets at the corps to meet all the demand. But at least the corps commander will be allocating his assets based upon his perceptions of the CAS needs and will not have to decide if his assets should be used for other missions (ie. combat air patrol). Since he would control everything within his area, some of what we refer to today as BAI would become CAS again and this somewhat confusing subcategory could disappear.

Under AirLand battle the corps commander is critically interested in shaping the battlefield. The attack helicopter and the AV-8 are great assets for this job. The second enemy echelon will normally be within the

corps commander's area of interest and his ability to strike them would enhance, not detract, from the theater commander's air campaign plan.

The Harrier (or a similar aircraft), along with the attack helicopter, as integral elements of the corps, can best implement the axioms of war and the tenets of AirLand battle. The speed and flexibility of these air attack assets provide the agility. Having them under the corps makes it easier to synchronize, and knowing that he owns them makes it easier for the ground commander to take the initiative. Let's collectively get on with the job of equipping, structuring, and training ourselves to meet the challenges of close air support in a changing world. The contingency corps, with perhaps a forward deployed corps in NATO and one in Korea, can best do their jobs organized as joint task forces with dedicated CAS assets, equipped correctly in recognition of CAS as an essential function, not an also-ran.

This report may have seemed critical of the Air Force. It was not intended to be. Each service has its own priorities and agendas. Unfortunately, CAS has not been given its due by either the Army or the Air Force. It's time to change and to put the internal conflicts to rest once and for all: the mud soldier in the weeds deserves no less.

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