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STUDY PROJECT

JOINT FIRE SUPPORT DOCTRINE--CONSENSUS PLEASE!

BY

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Operation Desert Shield/Storm permitted the U.S. military a rare opportunity to test doctrine formulated over the fifty-years of the Cold War. However, some of the early "lessons learned" are not the right ones. Evolving joint targeting and fire support doctrine suffers from a lack of consensus on what occurred in the desert. Prior to Operation Desert Shield/Storm, all Services agreed on joint fire support doctrine. After the war, revised Air Force doctrine scrapped previous joint targeting and fire support doctrine in spite of not being tested. Yet, the air campaign hardly resembled the doctrinal setting. This study reviews joint and Service targeting and fire support doctrine written before and after the Gulf War. Substantive issues exist only between the Army and the Air Force, particularly, the Air Staff. Issues include: availability of aircraft. allocation, importance of close air support, fire support coordination measures, control of airspace, control of indirect fire weapons, battlefield air interdiction, and the biggest

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USAWC MILITARY STUDIES PROGRAM PAPER

JOINT FIRE SUPPORT DOCTRINE--CONSENSUS PLEASE!

AN INDIVIDUAL STUDY PROJECT

by

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ABSTRACT

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Operation Desert Shield/Storm permitted the U.S. military a rare opportunity to test doctrine formulated over the fifty-years of the Cold War. However, some of the early "lessons learned" are not the right ones. Evolving joint targeting and fire support doctrine suffers from a lack of consensus on what occurred in the desert. Prior to Operation Desert Shield/Storm, all Services agreed on joint fire support doctrine. After the war, revised Air Force doctrine scrapped previous joint targeting and fire support doctrine in spite of not being tested. Yet, the air campaign hardly resembled the doctrinal setting. This study reviews joint and Service targeting and fire support doctrine written before and after the Gulf War. Substantive issues exist only between the Army and the Air Force, particularly, the Air Staff. Issues include: availability of aircraft, allocation, importance of close air support, fire support coordination measures, control of airspace, control of indirect fire weapons, battlefield air interdiction, and the biggest issue, joint targeting. A review of history documenting the evolution of air power, and its relationship to ground forces, does not lead the study to reach the same conclusions as the Air Staff after the Gulf War. The study concludes that ongoing efforts between the U.S. Army Training and Doctrine Command and the U.S. Air Force Tactical Air Command, both charged with developing joint doctrine for targeting and fire support, are on track.

INTRODUCTION

The days of a single Service conducting warfare without the support of or synchronization with another Service are over. The sophistication of modern weapons, including those of many Third World nations, and the mandated strength reduction of US armed forces, demands joint operations in all foreseeable conflicts, despite intensity. The success in future warfare depends upon how well the Services train together. Smaller Service budgets reduce opportunities for joint training exercises. The bridge between training events must be made with sound, well coordinated joint doctrine.[1]

Operation Desert Shield/Storm (ODS) is the focal point for the revision of many joint and Service doctrinal publications.[2] The degree of success in executing doctrine in ODS must be viewed with caution. As with Vietnam, the early "lessons" might not be the right ones.[3] This fact is particularly true for joint fire support. In a recent interview, a senior ground commander during ODS identified joint fire support as a major issue in evolving joint doctrine. He responded that all Services must codify joint doctrine as it relates to fires and fire support. This is significant commentary considering that he had the entire latitude of joint doctrine from which to respond.[4] Many ancestral problems in joint fire support coordination did not occur during ODS, although others did. As an example, a portion of the fratricides

occurring in ODS was not the type normally associated with fire support.[5] On the other hand, fire support experiences at the maneuver Combat Training Centers (CTCs) reflect problems not evident in ODS. These problems involve indirect fire weapons systems and the resolution of the issues affect joint fire support coordination.[6] New direct fire weapons systems also raise other fire support coordination issues.

The sophistication of Army attack helicopters requires positive control of the type normally associated with Air Force close air support (CAS) aircraft. Historically, the Air Force initially did not embrace AirLand Battle Doctrine as joint doctrine.[7] This point alone bodes ill for any subset of doctrinal publications that use AirLand Battle Doctrine as a basis. In any case, before ODS, the Army and Air Force hammered out an uneasy truce on procedures and terms for joint fire support. With the aforementioned points understood from the beginning, the purpose of this paper is to focus attention on evolving joint fire support doctrine and recommend solutions to the issues emerging from the after action reviews of ODS. The potential for disaster is great if the Services do not agree on joint fire support issues. Further, the study includes a brief discussion of current efforts to reduce fratricides within the Army. The results of the Army's efforts to reduce friendly casualties from indirect fire and aircraft significantly affects the complete application of joint fire support as well.

ORGANIZATION

The lead agent for Joint Pub (JP) 3-09, Doctrine for Joint Fire Support, is the Chief of Staff, Army. This study concentrates on the doctrinal aspects of JP 3-09 and the degree of consensus between the Services on joint fire support doctrine. The study addresses joint targeting as a joint fire support issue. The fact that tactics, techniques, and procedures appear in a joint publication of this nature is the subject of considerable debate and will be discussed later. JP 3-0, Doctrine for Unified and Joint Operations, is the joint keystone document upon which JP 3-09 builds. The focal point of these joint doctrinal publications is the unified commander in chief (CINC), the subordinate commanders and their staffs. The unified CINC is also a Joint Force Commander (JFC). Although the CINC may organize the unified command in any manner that best accomplishes the mission, the Services appear to favor the formation of air, land or naval component commands.[8] The CINC also may structure the unified command along Service lines, e.g., Army Component or Air Force Component.

This study assumes the formation of joint air, land, or naval component commands, unless stated otherwise. The commanders of the component commands become the joint force air component commander (JFACC), joint force land component commander (JFLCC), or joint force naval component commander (JFNCC). The term "commander," as in JFACC, is not used in the normal Service sense. Component commanders command forces of their own Service. However, without the Chairman, JCS or CINC changing the command relationship of the

forces in theater, a component commander only coordinates the operations of other Service forces, with similar missions. For example, the JFACC commands all Air Force assets in theater. However, the Army, Navy, and Marines also have aircraft in theater. By an extension of the omnibus agreement between the Marines and Air Force, all untasked air assets of other Services are subject to the tasking authority of the Air Force for the period covered by the air tasking order (ATO). In short, the JFACC commands Air Force assets and coordinates the operations of untasked air assets of other Services.

The method of approach used in this study is to evaluate each Service's fire support doctrine and decide how compatible each is with the draft joint fire support publication. Each Service provided comments on JP 3-09 during the staffing process. This study discusses unresolved issues and recommends solutions.

The Department of Defense Reorganization Act of 1986 focused considerable attention on the importance of assignment to and the functioning of the Joint Staff. The Act requires officers to be carefully managed, including promotion in all grades, and to ensure that the Joint Staff receives only quality personnel. The Act even requires that an officer obtain the joint specialty officer designator and serve at least one joint assignment before selection to flag rank.[9] Many, if not most, Service personnel have yet to serve on a joint staff. Consequently, joint doctrine becomes even more critical to accomplishing national military strategy throughout the operational continuum.

In the future, many units will be directed to perform joint missions without training in a joint environment. As mentioned above, smaller Service budgets reduce the training opportunities that were plentiful in the 1980s. Clear, concise, and unambiguous joint pubs ensure the understanding of the nature of joint warfare. Many agreements can be made during face-to-face coordination once the force is assembling. However, the Services must understand the requirements of the joint environment before beginning any campaign. Joint pubs should lay the foundation upon which joint operations build. There are many doctrine writers, both joint or service, who gladly spend countless hours explaining the intricacies of doctrinal wording and intent. Most Service personnel, without this experience, do not know the underlying intent if it is not clearly stated. Joint doctrinal publications are not necessarily the place to expound on the "how to" for any given function. Specific tactics, techniques, and procedures formulated by agreement or compromise between services, and are truly joint, belong in joint publications (JTTP). Normally, tactics, techniques, and procedures are matters for Service manuals. Sometimes, detail in TTP is necessary but that is the exception rather than the rule. Joint doctrinal pubs should, however, give the reader sufficient background to understand general principles and concepts. This is the method of review used in this study.

After reading applicable joint and Service doctrinal fire support publications, a subjective evaluation of the joint

publications determines whether Service doctrine blends, violates, modifies, or is in concert with joint doctrine. The intent is to focus on the issues. For example, the first issue in JP 3-09 is in the preface. Many recent joint pubs say that the doctrine contained within the publication is authoritative but not directive. Next is a statement that if there is a conflict between the joint pub and that of the Services, the joint pub takes precedence unless the Chairman, Joint Chiefs of Staff provides more current and specific guidance. These statements in the preface need to be changed. During the writing, coordination, and staffing of a joint pub, opportunity exists for each Service to comment. An efficient staffing process resolves Service disagreements with the proposed joint doctrine before the final publication of the joint pub. Once the publication is in print, joint doctrine takes precedence, period. Both joint and Service doctrine must be in agreement. The J-7, as doctrine sponsor, is the spearhead for the resolution effort.[10]

During this study, doctrine writers at key institutions provided valuable insight on the status of various issues. The purpose of the consultations was to understand issues between the Services. The overriding thought during these consultations was that most Service personnel would not have the opportunity to discuss these issues with another Service before going into action. The only authoritarian word on a subject would be the joint pub. Therefore, with access only to joint and Service publications, and not the author, the doctrine must be well written and clear.

Unresolved critical or major issues translate to a nonconcurrence on the joint fire support publication. More importantly, unresolved disagreements in a theater of war or operations could kill soldiers, sailors, airmen or marines.

The study project organization is in six parts: Army, Naval Services, Air Force, Discussion, Recommendations, and Summary.

ARMY

As the lead agent for JP 3-09, Army fire support doctrine is in consonance with joint doctrine. The basic reference for the Army fire support doctrine is Field Manual (FM) 6-20, Fire Support in the AirLand Battle. Although in greater detail, FM 6-20 totally agrees with JP 3-09. The Army manual requires more tactics, techniques, and procedures. The joint pub does not require the same level of detail as the Service manual.

The level of detail included in JP 3-09 is the subject of considerable debate.[11] JP 3-09 includes too many tactics, techniques, and procedures for this level of publication. A publication of this magnitude focuses on the "big picture." This level of joint pub should be viewed as guidance that a theater commander in chief (CINC), and also a joint force commander, gives to subordinate joint force commanders and their staffs. Tactics, techniques, and procedures are topics for Service doctrinal publications, unless the TTP are truly joint. The importance of detail in JP 3-09 is understandable. Considering the inherent danger associated with fire support of any kind, concerns exist that everyone in the fire support system operates from the same set of instructions. In combat, the potential for friendly fire casualties is great if the procedures for the clearance of fire support are not clear. JP 3-09 includes detail so that joint force fire support personnel have the most pertinent information for planning and executing joint fire support in one manual rather than having to refer to several. This is the point where JP 3-09

differentiates from a joint pub and encroaches on the domain of Service manuals. The joint force commander does not need to know how, where or what color a fire support coordination measure is to understand fire support. The lead agent researches Service doctrine in preparation for writing joint doctrine. Differences between Service doctrines are issues. They are "bumped up" the line until resolved. Some issues resolve much easier than others. Highly emotional or philosophic differences between the Services require special handling. Contentious issues, once resolved, should be discussed and defined in the joint pub. The joint pub contains the exact wording upon which the Services agreed. This is not true in JP 3-09. The procedures to reduce fratricides from air or indirect fire weapons systems may be an exception.

An issue under study at the U.S. Army Field Artillery School, Ft. Sill, Oklahoma, is the clearance of indirect, field artillery and mortar, fires. This is a joint issue because both of the ground components train using the same doctrine, tactics, techniques, and procedures at the Artillery School. The Marines do practice Service fire support with tighter control of fire support control measures. However, when operating with the Army, the Marines employ the same basic fire support doctrine as the Army.[12]

For years, the Army has cleared indirect fires both within and across maneuver boundaries, using doctrine, tactics, techniques, and procedures (DTTP) that emphasize characteristics such as speed and the concept of "silence is consent." Today's fluid operational environment invalidates these current DTTP assumptions. Until the

inception of the combat training center, opportunities to integrate fire support and maneuver on the same battlefield under battle stress conditions were very few. Even the opportunities to train fire and maneuver together were very tightly controlled. However today at Ft. Irwin (CA), Hoenfels (Germany), or Ft. Chaffee (AR), the accidental engagement of friendly forces with artillery and mortars is a constant, and mounting, problem.

Operation Desert Storm had only one indirect fire fratricide incident reported. The difference during ODS was that fire support personnel did not follow established doctrine. Fire support personnel elected to have more positive control of indirect fires. Choosing not to follow established doctrine sacrificed responsiveness, but potentially saved lives.[13] The new procedures were successful during ODS because the coalition controlled the pace of operations. There were very few threats to friendly personnel where indirect fire responsiveness was not in the coalition's favor. Under different circumstances, where the enemy is engaging friendly forces, and the situation is fluid and fast-paced, responsiveness of fire support is critical. The DTTP to institute more positive control of fire missions must be coordinated and published with all possible speed. The newer DTTP must be incorporated into unit training and at the combat training centers with all possible speed. The effect in the joint arena is minimal. Changing DTTP brings the Army more in line with the Marines anyway. The Marines opt for more positive control of indirect fire assets now. The Marines have practiced tighter

control of their fire support system for some time and requested that the Army tighten certain parts of JP 3-09 during the staffing process.[14] The point here is that as doctrine evolves, the tactics, techniques, and procedures to execute the doctrine also evolve.

Without organic combat fixed wing aircraft, the Army places significant emphasis on the use of attack helicopters to provide combat power in the third dimension. The Army employs attack helicopters primarily as a maneuver asset. As such, attack helicopters most likely will not be available to provide close air support, in the classical sense, to the force as a whole, but in mass at key locations. One tragic story from ODS concerned attack helicopters engaging friendly maneuver vehicles. This situation is similar to the indirect fire fratricide incidents of the past and those currently experienced at the combat training centers. The lethality of modern weapon systems and the ability to engage moving targets over extended ranges during reduced visibility require more positive fire control measures. The doctrine, tactics, techniques, and procedures to prevent fratricide from friendly aerial platforms must be strengthened. The doctrine concerning the employment of attack helicopters as fire support has an immediate effect on joint operations.

The development of the first "gunship" in the 1950s was a move by the Army to fill a perceived void in support by the Air Force. The Air Force had the charter to show a proof of concept for arming a helicopter after the Army submitted the original proposal.

However, progress was too slow. The Army designed and flew the old Sikorsky H-19 in a demonstration and Aviation branch was born again. At the time, the Army accused the Air Force of dragging their feet on the concept. Today, the Army uses attack helicopters and other rotary wing aircraft primarily as maneuver. This maneuver provides the ground commander tremendous firepower and versatility. As maneuver, attack helicopters can strike deep operational targets, e.g., combat vehicles, artillery positions, and FARPs, either with other Army units or joint. The joint air attack team (JAAT) integrates surface indirect fires, artillery and missiles, along with attack helicopters and Air Force aircraft in attacking operational targets. Army attack helicopters are more important in an environment where fixed wing aircraft are not available.

Attack helicopters used in a maneuver role, as a joint air attack team, or as close air support, must still coordinate their fires. The maneuver G-3 tactical operations center (TOC) and Fire Support Coordinator (FSCOORD) share the same command and control facility. Both plan and coordinate attack helicopter strikes, whether they are employed as fire or maneuver. The attack helicopter fratricide incidents are essentially identical with the problems experienced by artillery and mortars at the combat training centers.

Of the variables that must be considered in the attack of a target, the accurate identification of the target and the target location are the factors most often violated.[15] This does not mean

that weather, ammunition characteristics, direction of fire, or firing unit and observer locations, etc., are not important. Position locating devices are making friendly unit locations less of an issue, but if these devices break, fire support personnel must still know how to read a map. Poor weather, reduced visibility, fast pace, no sleep, extended engagement ranges, and lack of adequate identification methods on friendly maneuver vehicles compound the problem. Additionally, in coalition warfare, many of the same maneuver combat vehicles belong to both the enemy and members of the coalition.

In any regard, the ground commander's FSCOORD is responsible for coordinating the fires of artillery, mortars, and attack helicopters. Of course, the maneuver G-3 also has visibility of the maneuver air arm and its relation to the friendly trace. The possibility for disaster is still great if the doctrine is not clear and the tactics, techniques, and procedures to implement the doctrine are uncoordinated and not followed.

The Army doctrine in coordinating artillery, mortars, attack helicopters and other Army fire support systems has a significant impact on joint fire support doctrine. These doctrinal issues are particularly important in coordinating Air Force assets, many missions have a near real time effect on ground maneuver. The relationship with the Air Force takes joint fire support to a different level.

NAVAL SERVICES

The Naval Services are in concert with one another on the execution of Naval doctrine. Their habitual association, training and deployment make them a great team. The Marines provide a forced entry capability for the Navy by securing port facilities and beachheads for landing supplies and personnel. Navy aircraft provide fleet protection, deep strike capability, and support ground operations for the Marines. Marine aircraft provide support primarily for Marine ground forces but also perform complementary missions with Navy aircraft in support of the fleet and deep strikes.[16]

From a doctrinal standpoint, one of the most difficult operations any military force can undertake is an amphibious assault. Moving ground and air combat forces from a ship, across hostile waters to the beach requires teamwork. Amphibious assaults link air, ground, and sea forces together in a confined space demanding the closest planning and coordination of any operation. A naval officer on board the command ship maintains control of an amphibious task force until specifically passed to the landing force commander ashore. The passage of fire support coordination responsibility is the same. The responsibility for overall fire support coordination and the control of air and naval gun fire transfers to the landing force commander when the landing force commander establishes facilities ashore for control and coordination.[17] In most cases, the responsibility for overall coordination passes ashore earlier than control due to the more

complex facilities required for control. Once control of an amphibious operation is ashore, Marines exercise indirect fire support coordination similar to the Army.[18] Marines learn weapons, gunnery, target acquisition, fire support and fire support coordination at the U.S. Army Field Artillery School, Ft. Sill, Oklahoma. Army and Marine field artillery weapons are the same. Therefore, from a ground component standpoint, Army and Marine indirect fire support doctrine is conceptually compatible. The differences are in the tactics, techniques, and procedures used by the different services. The Marines recommend tightening control of joint fire support coordination measures and strengthening the wording of certain definitions used in describing fire support.[19] As of January 1992, the Naval Services nonconcur with JP 3-09. A need for tighter control of fire support coordination measures and procedures is the basis of their nonconcurrence. The Army is reviewing their DTTP, discussed above, to reduce friendly fire fratricide incidents. Tighter control of the entire fire support coordination process will occur because of this review. Once coordinated with the Marines, the revised, tighter-control, doctrine will be published and instituted in the Program of Instruction at Ft. Sill. JP 3-09 will then have Naval Service concurrence.

The key difference between the Marines and the Army in fire support coordination is the availability, control, and coordination of air assets. The Marines own their own combat fixed wing aircraft. The Marines already have established Service doctrine

for the employment of aviation to support the ground commander. Marine aviation supports the ground commander in securing advanced naval bases and conducting operations in support of a naval or land campaign. The Marines do not depend on their attack helicopters in the same manner as the Army.

The above discussion highlights two points. The first is that the Naval Services already deploy and train as a team. They, in essence, have one Naval Service doctrine. Second, the Army and Marines have very similar indirect fire support DTTP. Through the doctrinal exchange of liaison personnel, Marine and Navy fire support assets, to include Marine, and possibly Navy, fixed wing air, are available to the Army. Liaison personnel from the Fleet Marine Force Air/Naval Gunfire Liaison Company (ANGLICO) deploy as required. In the event that an Army unit attaches to a Marine unit, Army and ANGLICO exchange liaison teams. In summary, the fire support doctrine between these three Services is fully executable.

Almost any combination of major regional conflict(s) and/or lesser regional conflict(s) require joint Army, Marine, and Navy operations. Arguably, one of the biggest fire support differences between the Army and Marines is the nature of the relationship between ground and air forces. The Marines air wings are organic and their primary mission is to support the ground commander. The Army's relationship with the Air Force is crucial to the successful execution of the land campaign.

AIR FORCE

The current joint targeting and joint fire support doctrinal debate between the Army and Air Force revolves around issues of support and control. Support entails the mutual support of one Service for another. Control involves airspace management, weapons systems, coordinating responsibility, and targeting decisions within the theater of operations. Without joint doctrine, problems arise when Army and Air Force spheres of influence overlap in a theater of operations. A closer look at these joint issues is needed.

As mentioned earlier, the Air Force initially did not accept AirLand Battle Doctrine, in any form, as joint doctrine. Consequently, any joint targeting or joint fire support doctrine based on AirLand Battle was also in trouble. Between the inception of AirLand Battle Doctrine and ODS, the Army and Air Force gradually came to mutually agreeable solutions to their differences on warfighting doctrine. These solutions were possible largely due to joint work between the Army's Training and Doctrine Command (TRADOC) and the Air Force's Tactical Air Command (TAC). Service doctrinal publications gradually included procedures, terms, and definitions acceptable to both.[20] Since ODS, the Army and Air Force are again on divergent paths with respect to joint doctrine, particularly joint targeting and joint fire support.[21]

Discussions with doctrine writers of both Services[22] conclude that old fears and perceptions coupled with early "lessons learned" from ODS keep the Services from agreement on joint doctrine.[23]

Review of current draft or test doctrinal publications written by both Services reflects totally different points of view, as evidenced by Air Force Manual (AFM) 1-1, Basic Aerospace Doctrine of the United States Air Force, JP 3-0, JP 3-09 and JP 3-03, Doctrine for Joint Interdiction Operations. The Air Force's tone and writing style changed in the latest round of publications. Recent joint documents written by the Air Force tend to be much more general and vague, e.g., JP 3-03. The essay format for AFM 1-1 is also a unique approach.

The Army believes that the Air Force views ODS as the way to conduct all future joint operations.[24] The Army views emerging Air Force doctrine as not mutually supporting. AFM 1-1 says many of the same things that it did before. However, there is a difference in the tone of the document, not just the essay format. Interviews with Army doctrine writers who attended recent issue sessions with the Air Force emphasize that the tone of the manuals is the same as the rhetoric at the meetings. The change in Air Force philosophical approach to warfighting appears almost separatist. A recent four-star conference, held for the expressed purpose of resolving joint operations and joint fire support doctrine issues, failed to bring these issues to closure. At this critical juncture in history, when future contingencies require the application of joint forces, there is no joint targeting or fire support doctrine with which to employ the Army and Air Force in a joint environment.

The air campaign in ODS was successful, but did it test established doctrine? In rewriting JP 3-09 after ODS, the Army

recognized its disparity with emerging Air Force doctrine.[25] The Army's intent on publishing the final draft of JP 3-09 in June 1991 was to codify the agreements reached with the Air Force before ODS. This may have been the reason that so many tactics, techniques, and procedures appeared in the final draft. The Army has the tendency to include more TTP in their publications, whether the TTP are joint is another story. Publishing the "old" agreements would simply have retained the status quo. The earlier doctrine at the CINC (JFC), and subordinate joint force commander level, was good before ODS, just as it still is today.[26]

The Air Force bristles at the implication that the primary focus of fixed wing assets is to support ground operations.[27] Air Force doctrine in revised AFM 1-1 has fully grasped the strategic importance of aerospace power. The success of the air campaign in ODS, in spite of no opposition, dominates the Air Force's strategic thought. The Title V Report states that there was an air campaign, although there is still disagreement on the Joint Staff. The essays contained in AFM 1-1 read like a view of the battlefield from thirty-thousand feet.

Generally, many Air Force roles and missions provide support to ground forces. The Air Force provides airlift, electronic combat, surveillance and reconnaissance missions in support of ground forces. However, the missions of strategic attack, air interdiction (AI), and close air support (CAS) provide the most direct application of air combat power in support of ground forces.[28] These air combat missions are an integral part of

evolving joint targeting and joint fire support doctrine. The Air Force rightfully does not relish the thought of operational ties to the front line trace. The Army does not intimate that the Air Force's mission is solely to support ground forces either. The greatest portion of the doctrinal differences between the Army and Air Force involve the relationship of these air combat missions and their integration into joint targeting and joint fire support. When raising the issue of air support to ground forces, thoughts almost immediately turn to the allocation of combat air sorties and the availability of aircraft for CAS.

The Air Force reaffirmed its mission responsibility for CAS in recent Congressional testimony.[29] CAS is the application of aerospace forces in support of the land component commander's objectives. Since it provides direct support to friendly forces in contact, CAS requires close coordination from the theater and component levels down to the tactical level of operations.[30] Recent joint publications indicate that CAS now extends from 3-5 km. in front of friendly positions.[31] Newer weapons systems extend the range of CAS even beyond visual recognition characteristics. The Air Force describes CAS as the least efficient use of aerospace assets.[32] It probably is the least efficient use of air power. However, the shock, psychological and munitions effects of CAS provides friendly ground forces the momentary edge to continue the momentum of the attack. This synergistic force must not be undersold. The use of the term "least efficient" in an environment of decreasing budgets and manpower implies that CAS will be even

more scarce in the future. The more the Air Force views CAS as less efficient, the harder the Army emphasizes its importance. The current issue is more emotional than factual. A review of new Air Force doctrine may shed some light on where the CAS issue really stands.

AFM 1-1 is now two volumes. The first volume contains the basic "bare bones" essentials of Air Force doctrine. Volume II contains a series of essays that expand the doctrine contained in the first volume.[33] The essay that discusses CAS does a good job of hitting the essentials required for success. Several key points mentioned are; the requirement for close coordination between ground and air forces, that sorties reserved for CAS are not available for strategic or operational missions, fratricide, and the exploitation of munitions, shock and psychological effects of CAS by rapid ground maneuver. These are all good points and nowhere is the term "inefficient" used.

The Army and Air Force both recognize the importance of striking strategic targets deep in the enemy's rear. These targets are close to the enemy's strategic center of gravity and should be hit hard. AFM 1-1 also recognizes that the attack of operational targets is extremely important. If closely followed by friendly maneuver, striking targets at operational depth create opportunities for ground and air exploitation. Operational strikes rapidly deplete enemy resources before they can be massed to his advantage. AirLand Battle and FM 100-5 have long recognized the importance of the deep attack.

AFM 1-1 describes CAS as "in extremis" air support and the Air Force will fly it to ensure the survivability of ground forces. The Air Force does not say that CAS is not important. They are saying that, from a theater strategic standpoint, CAS is lower in priority than strategic or operational targets. The final result is that the CINC will make the decision on the air priorities for apportionment. Both the air and land component commanders, depending on how the CINC organizes the command, will make recommendations. The CINC's strategic intent is the basis of the decision. The CINC's vision of the most efficient application of ground, sea, and air forces is the basis of the strategic estimate. In spite of all of the rhetoric, CAS was the first mission that the Air Force (Army Air Corps) flew for the Army, in France, during WWI. It will continue to be a very important combat multiplier.[34]

Control of battlefield assets always develops into an emotional argument between the Services. Again, rational thought and open-minded discussion are keys to thinking "joint." From the very first powered flight, the Air Force, or Army Air Corps, gave the Army more freedom for ground maneuver because the Air Force controlled the third dimension. The lack of control of the air taught US forces some harsh lessons in the past. For example, the Army took a sound beating at Kasserine Pass, in February 1943, where air support was desultory at best.[35]

During ODS, there was plenty of CAS available once the ground war began. This was due to the length and success of the air campaign, which included total air supremacy. Targets that in past

wars were immediate or preplanned CAS became interdiction targets. This was not so much a factor of distance from friendly ground forces, as it was of forces not in contact. Aircraft whose primary mission was counterair conducted other missions. Even the A-10, normally dedicated to CAS, flew interdiction missions. This was great from a ground force viewpoint. Once the ground war began, ground forces developed tremendous momentum after breaching initial enemy lines and contributed to further success. In many battles, the enemy did not fight back, but surrendered almost immediately. When the enemy did fight back, the firepower from indirect weapons, rotary wing aircraft, and CAS were there to support ground maneuver and make the enemy think again.

During the forty-five day air campaign, time was sufficient to phase the air campaign. The phases generally corresponded to, in order, strategic, air superiority (counterair), interdiction, shaping the battlefield (BAI), and CAS missions. Simultaneous attack of strategic, air superiority, and interdiction targets occurred throughout the campaign, however phasing was still apparent. There was even ample time to search for and attack selected targets such as SCUD missile launchers. Before the ground offensive, coalition air forces controlled the tempo of attack. The JFACC had the initiative.

Without the luxury of 5-6 months to build up for war, and prepare the battlefield, the CINC's apportionment decisions most likely would be different. Logically, the number of sorties available for CAS, or almost any other mission, for any published

air tasking order (ATO) would be reduced. This is because the number of targets engaged is the same, but there is less time to hit them. The CINC's targeteers have more targets to attack than available assets or time. The tradeoff analysis leading to the apportionment decision is crucial. More than likely, the CINC initially focuses on strategic and operational targets. The importance of the overall theater campaign is paramount in the decision process. However, operational and tactical fires are necessary to shape the battlefield and ensure that the ground attack maintains momentum. In this situation, CAS would be available to ground forces, although probably not as much as requested. The issue becomes one of having to conduct essentially all aerospace missions simultaneously. The CINC determines the priorities. In a fast-paced operation, the JFLCC will probably focus more attention on BAI, rather than CAS anyway.

In planning future theater strategy, CINCs must plan for the worst case and have contingency plans prepared when the situation changes. Based upon recommendations made by his subordinates, the CINC's theater strategy is key to the apportionment decisions. CAS is one means the CINC has of influencing the outcome. Even if the CINC does not have complete freedom of movement in the sky, CAS will be part of the plan. The Air Force has flown CAS since it flew the trench strafing missions during World War I.[36] Close air support, in today's doctrinal discussions however, is secondary to more philosophical issues that may require guidance from the Chairman, Joint Chiefs of Staff to resolve.

Although many soldiers concentrate a lot of attention on the availability of CAS, the targeting, control, and coordination of operational (air interdiction) missions are more important. Operational missions affect the manner in which the enemy employs forces and the rate at which friendly forces engage them. These missions are often defined by the effects achieved in conjunction with friendly ground operations. From a ground component viewpoint, operational targets have either near or far term effects on friendly maneuver. The discussion of these effects and who manages them is a doctrinal dilemma. It is ironic that the Army and the Air Force still continue to debate battlefield air support issues, even after seventy years.[37]

Between CAS and air interdiction (AI), a "grey" area of time, space, and terrain exists where the Army and Air Force differ philosophically, again. The control of this area is the focus of considerable debate. The issues concern targeting, airspace control, coordination requirements, effects on ground operations, priority, and freedom of attack. Prior to ODS, the Army and Air Force agreed on these issues. Service publications reflected their agreement.[38] To understand the issues, background on the Air Force mission of air interdiction from both air and land perspective is necessary.

Air interdiction disrupts, delays, or destroys an enemy's military potential before it can be used against friendly forces.[39] Most AI targets are beyond the range of friendly surface indirect fire weapons--field artillery and mortars. Army attack helicopters

also engage targets or maneuver deep in enemy territory. They are used for joint AI missions with the Air Force. Their use in joint operations is included in current joint publications. Attack helicopters are used primarily as a maneuver asset although they also may be employed to provide CAS. Because of their flexibility, attack helicopters must be closely managed. Many of the coordination and targeting issues of indirect fire support also apply to Army Aviation.

Before ODS, the Army and Air Force agreed that AI against targets with near term effects on friendly land forces would be called Battlefield Air Interdiction (BAI). The primary difference between BAI and AI is the level of interest and emphasis the land component commander places on the process of selecting, identifying, targeting, and attacking BAI targets. BAI requires more detailed joint coordination during planning and may require similar detailed coordination during execution. One of the most significant recurring problems between the Army and Air Force in attacking BAI targets is lack of adequate command, control, communications, and coordination. A fast-paced, rapidly moving scenario exacerbates this problem. The exchange of liaison personnel with compatible communications equipment simplifies coordination. The Army performs this function with liaison personnel in the Battlefield Coordination Element (BCE) of the Air Force's Tactical Air Control Center (TACC). This section is large enough so that there are representatives in each of the key cells of the TACC. The Air Force has Air Liaison Officers (ALOs), as

members of the Tactical Air Control Party (TACP) at the maneuver G-3/S-3 (Air), collocated with the FSCOORD in the maneuver tactical operations center (TOC). The TACPs coordinate and communicate with the TACC through the Air Support Operations Center (ASOC).[40] The command and control systems are in place to affect coordination. Bigger problems exist in the procedures for joint targeting. Questions include; what targets to strike, who attacks them, when are they attacked, and who controls the targeting process.

BAI targets include enemy unit concentrations, convoys, supply depots, artillery units, communications centers, etc. These targets are considered BAI when the land component commander determines that their continued operation will have an immediate impact on friendly ground forces. That is, BAI targets are engaged before these assets can be brought to bear on friendly ground forces. Close joint coordination ensures that in attacking enemy targets, friendly ground maneuver units can take advantage of the momentary degradation of the enemy's capability to influence the close battle. These same target sets are AI targets if their near term application does not immediately affect friendly maneuver. Subsequent discussion on "near term effects" follows later in this section. Ground maneuver also may change the enemy's scheme of maneuver. A new scheme of maneuver may present lucrative targets for Air Force attack as BAI. In order to set the stage for determining the targeting decisions, a picture of the battlefield parameters is needed.

In a theater of war, the CINC delineates the latitude the

JFLCC has to maneuver by delineating boundaries on a map. The JFLCC maneuvers within those boundaries, unless obtaining permission from the CINC to do otherwise. Everything within the boundaries, including the land, water, and airspace, becomes the JFLCC's area of influence. Areas immediately adjacent to these boundaries, adjacent ground units, become the JFLCC's areas of interest. Activities in adjacent units are important because actions on one side of a boundary can spill over into the adjacent zone, and thus become another land commander's problem too. With the emergence of air power as a major factor in the conduct of war, the ability to strike targets across the length and breadth of the battlefield is critical in achieving the CINC's intent. The ability to range the battlefield, without respect for linear boundaries, is possible with the application of joint weapons systems and thus, joint targeting and fire support.

As the tempo of maneuver warfare and the range of maneuver weapons increase, the distinction between air missions become less clear. CAS engages targets in contact with maneuver, but may extend out to three km. from the front lines. This increased range approximates the engagement range for modern tank weapons. The fluid nature of maneuver also means that adjacent units may not be moving at the same rate. Under these circumstances and "fog of war," possibilities for fratricide increase, either from air, direct, or indirect fires. Conversely, beyond the range of indirect fire support systems, air systems predominate. AI, for the most part, strikes targets beyond the range of indirect ground

fires, again attack helicopters are a special case. In general, the responsibility for coordination and targeting is clear until this point. The land component controls CAS and the air component controls AI.

The JFLCC also delineates boundaries for his subordinates. With the CINC's intent in mind, the JFLCC may designate other control measures; phase lines, axis of advance, etc., to assist in shaping the campaign. One such fire support coordination measure is the fire support coordination line (FSCL). The JFLCC establishes the FSCL in front of the forward line of own troops (FLOT). Normally, the FSCL is established at or near the maximum range of most indirect fire weapons, that is approximately 30-40 km. The FSCL permits any supporting arm, land, naval or air, to engage targets forward of the line without prior coordination with the JFLCC provided the attack does not produce adverse effects on or short of the FSCL. All fires short of the FSCL must be coordinated with the appropriate ground maneuver unit. CAS missions are flown within the maneuver unit's lateral boundaries, the FSCL, and on both sides of the FLOT. The depth of the battlefield may extend several hundred kilometers beyond the FSCL. Targets beyond the range of ground weapons systems and of sufficient depth not to present a "near term" threat to ground forces are AI targets. The point where the ground component commander and the air component commander transfer responsibility for targeting decisions may be designated by a phase line drawn along an easily recognizable terrain feature or, the most flexible

solution, simply by close coordination and agreement between component commanders. The CINC gives the JFACC the freedom to attack AI targets, without coordination, according to the campaign plan.

Volume II, AFM 1-1, discusses BAI as a subset of AI.[41] BAI attacks targets that have near term effects on ground maneuver, but are not in close proximity to friendly forces (CAS). BAI targets do not require the detailed integration with maneuver that CAS missions do, but joint coordination is absolutely necessary. BAI also may be flown on either side of the FSCL depending on the disposition of friendly ground forces. It seems that close coordination between Services is what is needed. Control of these missions becomes a big issue.

Prior to ODS, the Air Force agreed that all targets short of the FSCL and BAI targets beyond the FSCL would be coordinated with ground forces. The Army agreed that all AI targets within sector, within lateral boundaries, did not require coordination with maneuver. This was a satisfactory compromise. The Air Force retained freedom of action and planning responsibility for all AI targets. BAI targeting was the responsibility of the land component commander. The land component commander had the determining vote on "near term effects." In other words, BAI required joint coordination at the component level.[42] The Army retained control of the tempo of attack, determination of the targets to complement the maneuver plan, orchestration of the battle and had air support. Coordination was mutual. Because the

ground component nominated targets that needed attack, he felt that he had control of the tactical battle. One unified command's answer to targeting issues established a system that soon became a model for other commands.

In NATO, BAI is not part of AI, but a subset of offensive air support. The planning and targeting of BAI is the responsibility of the corps commander. Most BAI missions are beyond the FSCL. To facilitate operations, NATO instituted a separate graphic control measure, closer toward the enemy, but beyond the FSCL, to portray where responsibility for BAI begins. The Reconnaissance Interdiction Planning Line (RIPL), a phase line drawn along easily recognizable terrain, indicates where the corps commander is responsible for BAI. The Army Group commander is responsible for targeting beyond the RIPL (AI).[43] This technique is satisfactory in NATO, but with new Air Force doctrine, ODS proved to be an eye opening experience for one ground commander. When one corps commander deployed on ODS, he was expecting to find a RIPL. Instead, he found that there was no RIPL and that he had neither planning nor targeting responsibility beyond the FSCL, in spite of numerous surface weapons that could range beyond it. In this situation, the depth that the maneuver commander could shape the operation severely restricted his options.

The Air Force now balks at earlier, pre-ODS, agreements. The solution to the BAI targeting issue is to determine whether the air component or land component controls the targeting decisions. Control of targeting involves which target should be attacked, when

it should be attacked, and how it should be attacked? Tied in with this discussion is the idea of who determines if there are "near term effects on ground forces?" BAI usually responds to targets within about 25-120 km. from friendly positions. However, for targets beyond three km. and short of twenty-five km., BAI is not responsive. In such cases, enemy "travel" time is likely to be less than the processing time for a BAI request. There must be a decision-making structure in place to provide rapid response to immediate targeting requests beyond CAS but shorter than the ATO cycle. But the current ATO process does not adequately provide for joint targeting.

The latest Air Force doctrine proposes that any attack, indirect or air, taking place forward of the FSCL be coordinated with the Air Force. Therefore, ground forces must coordinate with the air component commander to engage ground targets beyond the FSCL. This includes engaging ground targets with organic indirect fire weapons and munitions. The land component commander may nominate targets, but the engagement decision belongs to the air component commander. This proposal takes a tremendous amount of flexibility away from the land component. The CINC makes the apportionment decision. He should not be deciding which specific targets to attack, but should the targeting decision be made by the JFACC? Who is the CINC's executive agent to make those decisions?

The Air Force believes that as a strategic force, aerospace assets should not be subordinated to surface elements of power and that the targeting decisions belong to them.[44] Again the tone of

Air Force doctrine, and rhetoric of the doctrine writers, suggests an increasing willingness to focus deep and conduct predominantly separate Service operations. The Army is back to believing that fixed wing air will not be available or, if available, there is no requirement for coordination, despite the effects on ground maneuver. Air delivered weapons effects in proximity to forces in contact may accidentally hit friendly forces. Aircraft flying at depth, however, with plenty of maneuver room, are far more survivable. Aircraft that survive are available to fly later.

The Air Force proposes that the use of fixed wing air assets should be the subject of a separate joint publication and not considered as joint fire support.[45] On the surface, the Air Force apparently is still fighting for the independence achieved, essentially, in 1943.

DISCUSSION

The substantive issues of joint fire support doctrine really boil down to resolving problems in joint targeting. Up to this point, the earlier background information established the framework to focus on joint targeting issues. In formulating the campaign plan, the JFC must decide what target sets to attack, how to find the targets, and how to attack them in accordance with the plan. The JFC has the capability to synchronize all of his forces in executing the plan. The Gulf War presented several teaching points for joint targeting, in spite of the force mismatch. The initial period of Desert Storm was heavily Service oriented, particularly the air campaign. The operations were joint, but weighted predominately with USAF missions. Under these circumstances, this was right. As the CINC's (JFC's) plan developed, operations became more joint. When the land campaign neared execution, joint targeting became a bitter struggle between the JFACC and the Army commanders. The JFACC did not want to relinquish any control or targeting decisions, as the doctrine in AFM 1-1 (91) subsequently reflected. This lack of unity of effort came at the very time when the campaign required joint operations. The standoff necessitated the DCINC assume a more direct role in apportionment and joint targeting decisions late in the war. The evolution of the joint targeting process in ODS is instructive. The lessons involve intelligence, target acquisition, battle damage assessment, campaign planning and the joint fire support system.

One aspect of the air campaign that did not receive an

appropriate amount of attention was battle damage assessment (BDA). Usually, US forces depend on a multitude of sensor systems to provide intelligence information. Eventually, national systems will provide coverage for the entire globe. Funding profiles during the 1980s phased such systems into operation. Regions of the world with the greatest need fielded the national sensor systems first. In Europe, for example, US forces prepared for war as part of NATO. Many of the national intelligence systems targeted the Soviet Union and Warsaw Pact. ODS presented a problem for these same intelligence systems. Although national systems provided coverage for the region,[46] it was not adequate for real time targeting in late 1990 and early 1991. Once obtained, the system forwarded the pictures to its headquarters in the US. The pictures were not immediately available to the commander on the ground. Initially, air mission pilots and on-board cameras made the battle damage assessment. This procedure provided some evidence of a target hit, but not the extent of damage, or if there was a near miss.

There was concern in the Pentagon that information released on the extent of damage would provide Iraq an indication of which targets were to be engaged, or engaged again. The Pentagon had access to the photographs before the commander on the ground. On many days, the weather was so bad that photos were impossible. Weather prevented many pilots from visually identifying targets or determining damage. Estimates were that the "smart" bombs were over ninety percent effective. Conversely, "dumb" bombs were only

approximately twenty-five effective.[47] Once the ground campaign began, reports from the field show that the twenty-five figure for all air delivered munitions was probably about right. Further, Iraqi prisoners indicated that the use of "dummy" positions proved useful in decoying coalition aircraft away from actual positions, thus ensuring their survivability.[48]

In the future, remotely piloted vehicles (RPVs), such as the Navy/Marine Pioneer or the Army Aquilla, would provide viable operational or tactical intelligence and targeting platforms. RPVs have the characteristics that many current intelligence gathering systems do not have. They are very hard to observe, have a long loiter time in the target area and provide real-time video or IR images. RPVs provide the CINC immediate intelligence information for battle damage assessment and for future targeting. Also, there must be a concerted effort to provide real time results of intelligence gathered by national systems to the CINC.[49] The accuracy and resolution of these systems is without equal. A network of systems at the national, operational, and tactical levels are available. Their products must be made immediately available to the CINC.

The Iraqi strategic center of gravity is, and was, Saddam Hussein. The assailable center of gravity, without raising the moral issue of why Hussein was not, was the Iraqi Army. To be specific, it was the Republican Guard. Militarily, coalition forces had to defeat the Republican Guard. The Air Force view that air power defeated the Iraqi field army[50] is a disservice to joint

warfare. That statement also makes quarrelsome issues on joint targeting and fire support difficult to resolve.

All Services recognize that the JFC's campaign plan and the survivability of the entire force is his responsibility. The Army does not, and should not, want to own Air Force fixed wing assets. Air Force aircraft have a mission far bigger than CAS alone. The important point is that the JFC will not let his land campaign falter due to lack of adequate air support. The JFC's apportionment and targeting guidance to the joint force air component commander targets the air campaign at strategic, operational and tactical objectives in support of the overall theater campaign plan. The difficulty with the targeting process as proposed is that the overall campaign plan is the CINC's, not the JFACC. The CINC's targeting guidance must apply appropriately to all subordinate JFCs. The JFACC is not the best choice to coordinate the targeting effort in support of the overall campaign plan. One lesson relearned several times since WWI is that for success, the air and land campaigns must be synchronized to take maximum advantage of each other.[51] The decisive arm in any campaign may change. As long as the war is successful, all arms are successful.

In fluid situations, targeting is an extremely important issue. Today's maneuver forces can travel great distances in a very short time. Air and indirect fire support weapons systems attack targets before they can influence the close battle. The air power missions of AI, BAI, and CAS immediately come to mind. To

ensure freedom of action, local air superiority, at a minimum, is a requirement. Based upon the current capabilities of the U.S. Air Force, air superiority in the theater of war/operations, or possibly air supremacy, is more likely. This calls for defeat of the enemy's air defense systems. Throughout the world, countries with an air force watched the developments in ODS with great interest. The success of the U.S. air campaign will be emulated by many air forces.

The lack of a credible Iraqi air defense threat was noticeable. The Iraqis had an air defense capability, however it died early. Even portable SAMs, such as Stinger and Blowpipe, that raised such havoc in Afghanistan, were noticeably absent. In planning an air campaign, air forces must plan for an air defense threat, even if it is only the portable type. Strategic and AI targets will most likely be protected by several air defense systems. The probability of the loss of an air crew is higher, as friendly air forces venture deeper. Conducting strategic attack and AI missions might be more appropriate for low observable systems like for cruise missiles, or if manned aircraft are the only option, the F-117 or B-2. Additionally, because of their depth, certain AI targets may be rebuilt in time to be of assistance to the enemy later in the campaign.

A campaign plan requires carefully synchronized air and land operations. This is partially due to less threatening air defense environment and reduced target recognition requirements. Targets such as command posts, artillery batteries, and maneuvering enemy

forces are particularly vulnerable. Striking these targets immediately before their use against friendly forces reduces enemy combat power and increases friendly momentum. To be effective, the attack of interdiction targets must be closely followed by maneuver. As such, BAI missions have a much greater prospect for success. Solid arguments propose that BAI enjoy a higher priority of execution than air interdiction.[52] GEN Omar N. Bradley drew the same conclusion in his "Effect of Air Power on Military Operations-Western Europe" study in 1945.

The planning, coordination, control, targeting, and execution of BAI are again issues to be resolved. Yet, a solution was in place at the end of ODS. Air Force doctrine still recognizes BAI as a subset of AI. From the Army standpoint, this is positive. It is inconceivable to understand how almost fifty years of doctrine development, since the last high-intensity war, could be scrapped in favor of the "lessons learned" in a 45-day, mid-intensity campaign. Since World War I, history has shown repeatedly that the Services are interdependent.

The most reasonable solution to the BAI discussion begins with acceptance of the current employment of the FSCL. Normally, the FSCL follows an identifiable terrain feature, approximately 30-40 km. in front of the FLOT. All fires whether fixed wing, rotary wing, or surface indirect fires must be coordinated if they fall short of the FSCL. This group includes a portion of BAI. However, this portion requires the most immediate response and less planning time. As such, BAI that falls short of the FSCL is the most time

sensitive. Currently, any fires forward of the FSCL do not require coordination. In a rapidly moving situation, FSCLs may be established sequentially, and may be "activated" like phase lines. This poses a problem for the Air Force. Air crew survivability is an issue if air and land forces attack the same target simultaneously. Field artillery and mortar fire in the vicinity of aircraft always concerns the Air Force. This contributes to the CAS discussion too.

The fielding of the Advanced Tactical Missile System (ATACMS) changed the whole picture. Not only is air crew survivability a problem, but ATACMS can range many deep operational targets that once were the sole domain of the Air Force. Now, without coordination, ATACMS and AI may be attacking the same target well beyond the FSCL. During ODS, the Air Force initially wanted ATACMS fires planned and coordinated two hours in advance. As discussed earlier, the situation was so fluid, and FSCLs changing so often, that many deep targets fell short of the FSCL within two hours. Late in the 100-hour ground war, the Air Force requested only notification that ATACMS was to be fired and at which target. This may have been satisfactory, but it can be done better.

Liaison personnel are present in the operations centers of both air and ground component headquarters. Operational target planning takes place well in advance. Coordination and conflict resolution are the functions performed jointly by the Service staff sections and assigned liaison personnel from other Services. The staff sections determine which fire support means are best for

attack of a given target, given the availability of air and ground weapons systems. Constant communication between liaison personnel and their Service operations centers keep the information, target lists, operational overlays, etc., flowing.

The coordination process requires the dissemination and synchronization of component campaign plans. The structure to perform these functions is currently in Service doctrine and it works. The air and land components both have targeting cells. However, future operations will be joint. In joint operations, targeting must be joint also. Centralizing the targeting functions streamlines access to all engagement means and provides a true joint unity of effort. A joint targeting cell makes all targeting decisions. The responsibility for deciding when the land component relinquishes control of airspace, and vice versa, also must occur in the same place. The process requires simplification and a joint targeting manual. Common radios and computer systems are also a consideration. Targeteers working from the same joint manual, at the joint, component or subordinate levels, will then be in concert with one another.

HQ, TRADOC and HQ, Tactical Air Command created an AirLand Forces Application Agency (ALFA), at Langley AFB, VA, in 1975. ALFA puts form and substance to the Army and Air Force 31 Initiatives.[33] ALFA publishes an AirLand Bulletin every quarter. In it, articles discuss joint issues and the direction that joint doctrine is heading. ALFA designed the joint doctrine of the joint air-attack team (JAAT), joint attack of second echelon forces

(J-SAK), and Joint suppression of enemy air defenses (J-SEAD). The Army Staff agrees with the doctrinal foundation established jointly by TRADOC and TAC. The Air Staff does not appear to agree with TAC. TAC and TRADOC, through ALFA, continue to publish excellent joint articles in the AirLand Bulletin. Tactical Air Command, a specified command that executes Air Force warfighting doctrine, is in the best position to decide the doctrine to implement.

RECOMMENDATIONS

It is time to get back to basics. The first prerequisite is that all commanders and staffs in the unified command structure must think "joint." All of this study's recommendations make joint thought a precondition. Doctrine in place before ODS reflect years of experience and study.[54] Pre-ODS doctrine anticipated hostilities in Europe. Conflicts in other regions, and of other intensities, require different levels of effort from each Service. This is similar to a predominance of one type of air mission depending on whether the battlefield situation is fluid or static.

There are many who believe AFM 1-1 and FM 100-5 say the same thing. Many get hung up on the "inefficiency" of CAS and fail to read further. The Air Force does not say that CAS is unimportant. Aerospace power should be focused on targets that have a long term impact on the enemy's ability to prosecute war. The success of the air campaign in ODS lends credence to their belief in the importance of air power. No one disputes the claims made about the potential of air power. There are disputes on the degree of effectiveness in the air campaign, however.[55] Again, neither the air nor land campaigns fully executed written doctrine, including AirLand Battle (FM 100-5).

The solution to joint fire support issues are resident in the solution to joint targeting. The CINC (JFC) needs a full time Joint Targeting Board (JTB). The DCINC, or Deputy in a joint task force, should preside over the Board. All Services have representatives as active members. The Board's mission is to take

the CINC's strategic guidance and, in conjunction with the campaign plan, coordinate and control the CINC's joint targeting process. The JTB recommends targets, the assets to find the targets, the apportionment portion of the ATO, and attack means. The JTB assimilates the recommendations of subordinate commanders in accordance with the campaign plan. The DCINC is in the unique position of having constant contact with the CINC, is kept abreast of changes to the campaign plan, and is a peer or senior to the subordinate commanders. Regardless of Service, the DCINC's allegiance is to the success of the campaign plan.

Services should agree that joint targeting and fire support coordination is the key. The JTB coordinates targeting and fire support. Because the JTB resolves the target handoff between the air and land components, there may be no requirement for a joint fire support coordination measure to distinguish BAI from AI, or more appropriately operational from strategic fires. If Service agreement fails, in spite of fifty years of face-to-face coordination, a fall-back position similar to NATO is recommended. The start point is the FSCL. At some mutually agreed upon terrain feature forward of the FSCL, an additional control measure, similar to the RIPL, differentiates BAI from AI.[56] The JTB plans and targets BAI and other air missions short of the RIPL as the coordination and execution responsibility of the land component commander (JFLCC). Joint fire support, including ATACMS, short of the RIPL also requires JTB coordination. Fires beyond the RIPL; AI, strategic attack, etc., are planned and targeted as the

responsibility of the air component commander (JFACC). The JTB adjudicates the CINC's joint targeting priorities.

The JCS, J-7, as Joint Staff proponent for doctrine, must take an active hand in coloring joint fire support doctrine purple. The JTB must be established as doctrine. The J-7, JCS needs to call a working group together composed of representatives from each warfighting CINC to establish joint doctrine, tactics, techniques, and procedures for joint targeting. The final product of the working group will be a joint targeting manual that includes doctrine for joint fire support. Only the tactics, techniques, and procedures (JTTP) required to make the joint doctrine clear need be included.

Unresolved issues create inefficiencies in a joint force. The impression carried by many is that the Joint Staff is too small to monitor establishment of joint doctrine. Additionally, many think that when the Chairman, JCS approves doctrine, formerly unresolved issues are no longer problems. As with AirLand Battle Doctrine, this is not so. The Joint Staff must get the teeth necessary to put together substantive doctrine.

What the joint arena needs is to work more in a "Purple Haze." Each Service has a mission and the most important challenge DoD and JCS face is how best to perform each mission. Current thought, during this transitional period, is that in the face of decreasing Service manpower, smaller Service budgets, and regional instabilities, all future conflicts, despite intensity, will be joint. It is time to push parochialism aside. The Army recognizes

the Air Force's strategic mission. It is important for the Army to know that fixed wing air assets are available to support the joint force land component commander. Both the Army and Air Force favor a joint force land and air component command structure. No joint force commander is going to allow his land component to fight without support from the third dimension, either with rotary and/or fixed wing air assets.

JP 3-09 should focus on joint targeting and joint fire support doctrine for the joint force commander. The new revised JP 3-09 should be succinct enough that joint targeting and fire support doctrine can easily be included in one manual. Tactics, techniques, and procedures should be avoided unless they result from compromise between services--joint TTP (JTTP). For example, the FSCL and RIPL merit discussion, but not the remainder of the fire support coordination measures.

SUMMARY

In summary, joint fire support doctrine is not joint, yet. The Naval Services and the Army are on the right track and common DTTP helps tremendously. Significant work must be done by the Army and the Air Force to agree on joint targeting and fire support doctrine. In future conflicts, the US military will fight as a joint force. The preeminence of any one Service may vary as often as the theater of war changes, but the Services are interdependent. It is time the Services put rhetoric aside and worked on solutions, such as the procedures to dramatically reduce fratricide.

There are joint solutions to joint targeting and fire support issues currently under review that have merit. Most notably the concept proposed in TRADOC Pam 525-5: AirLand Operations. Formulated in a joint environment by TRADOC and Tactical Air Command, TRADOC Pam 525-5 is real progress. Additionally, the AirLand Bulletin published by TAC-TRADOC ALFA, Langley AFB, VA, is a real time means of disseminating current joint thought, doctrine, tactics, techniques, and procedures.

The lessons from ODS will be studied for years. But, these lessons also must be viewed with caution. Current joint targeting and joint fire support doctrine evolved over a seventy-year period, and particularly in the last forty-seven years. ODS validated that history. However, ODS is not the yard stick from which to measure how the Services should plan, coordinate, and execute joint targeting, joint fire support or joint doctrine in general.

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ENDNOTES

1. Lt. Col. William F. Furr, USAF, "Joint Doctrine--Progress, Prospects, and Problems," AIR POWER Journal (Fall 1991): 37.

2. The number of joint and service publications under revision are too numerous to list, however, a few are listed below:
   - Joint Pub (JP) 1, Joint Warfare of the US Armed Forces
   - JP 0-1, Basic National Defense Doctrine
   - JP 3-0, Doctrine for Unified and Joint Operations
   - JP 3-09, Doctrine for Joint Fire Support
   - JP 3-52, Doctrine for Joint Airspace Control in the Combat Zone
   - JP 5-0, Doctrine for Planning Joint Operations
   - Field Manual (FM) 100-5, Operations
   - FM 6-20, Fire Support in the AirLand Battle
   - TRADOC Pamphlet 525-5, AirLand Operations
   - Air Force Manual (AFM) 1-1, Basic Aerospace Doctrine of the United States Air Force
   - Fleet Marine Force Manual (FMFM) 2-7, Fire Support in Marine Air-Ground Task Force Operations

3. James O'Bryon, "Gulf Victory Provides No War Blueprint," Defense News, (18 March 1991): 27.

4. LTG John Yeosock, USA, ARCENT Commander, ODS, seminar discussion, 13 December 1991, Carlisle Barracks, PA.

5. Normally, fratricide conjures up thoughts of heavy artillery hitting friendly positions, killing and injuring many friendly soldiers. Fratricide includes all friendly fire incidents, however, the artillery is usually thought to be the main cause. Experiences at the combat training centers bear this out. Close air support and attack helicopters are subject to have problems with friendly recognition in fast moving scenarios. Many of today's aircraft have all-weather, day or night, beyond visual recognition targeting capabilities. Engagement ranges are measured in kilometers. During ODS, attack helicopters accidentally killed several soldiers by mistakenly engaging friendly combat vehicles at night, during reduced visibility, and at ranges of several hundred meters. Friendly combat vehicles did not have electronic "friend or foe" identification equipment. The sophistication of attack helicopters makes them subject to similar incidents in the future. There was only one injury associated with artillery fire.

6. U.S. Army Field Artillery School, "White Paper--Doctrine, Tactics, Techniques, and Procedures (DTTP) for Clearance of Indirect Fires," (Ft. Sill, OK: 31 December 1991), 1-13 (hereafter referred to as "White Paper").

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