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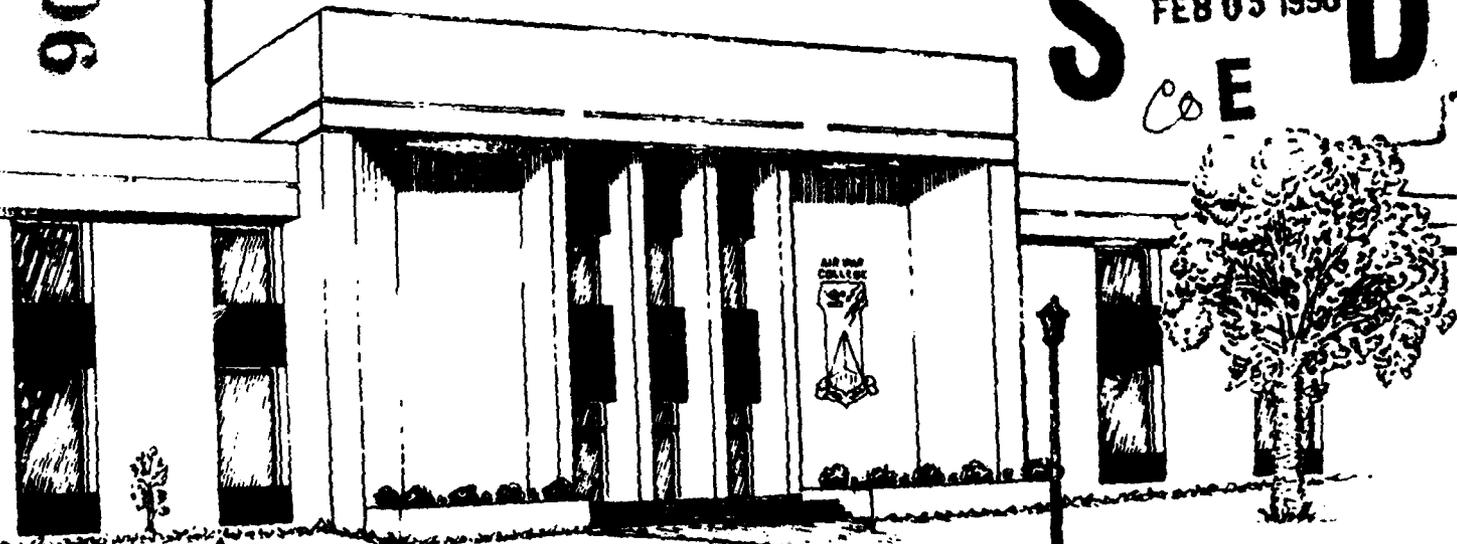
RESEARCH REPORT

COMBAT SUPPORT DOCTRINE:
GUIDANCE OR HINDRANCE?

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UNITED STATES AIR FORCE
MAXWELL AIR FORCE BASE, ALABAMA

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COMBAT SUPPORT DOCTRINE:
GUIDANCE OR HINDRANCE?

by

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A DEFENSE ANALYTICAL STUDY SUBMITTED TO THE FACULTY
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Advisor: Mr. Ted Kluz

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EXECUTIVE SUMMARY

TITLE: Combat Support Doctrine: Guidance or Hindrance?

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The interrelationship of strategy and logistics is discussed leading to a review of the development of logistics doctrine and principals of combat support. The Air Force's present doctrine on combat support and a logistics concept of operations developed to support it is described. Emphasis is on how combat support doctrine and the concept of operations affect the tactical air forces and their ability to project combat power. Present combat support doctrine and its resulting concept of operations is, guiding the tactical air forces correctly. However, several areas of concern are identified and suggestions provided. (S)



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BIOGRAPHICAL SKETCH

Lt. Colonel Dennis L. Reynolds has been in the logistics field for the past ten years as an aircraft maintenance officer. He has held positions of responsibility as an Aircraft Maintenance Unit Officer-in-Charge, Squadron Maintenance Supervisor, three-time Maintenance Squadron Commander, and Assistant Deputy Commander for Maintenance. He has been associated with fighters for the past 20 years, specifically, the F-4, F-15, and F-16. Lt Col Reynolds is a Senior Navigator with over 1200 hours fighter time and 243 combat missions in Vietnam. Lt Col Reynolds is a graduate of the Air War College, class of 1989.

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CHAPTER I

INTRODUCTION

"Logistics...comprised many activities but was a single whole. To ignore or reject its unity and the interrelationship of its parts was to divide...a functional category of the art of war. Separating supply and transportation from engineering, maintenance, hospitalization, administration, and other aspects of logistics...left those interdependent activities...without unifying direction... a certain invitation to defeat in battle and disaster in war."

Pure Logistics by George C. Thorpe

Logistics, as defined above, is everything outside of the operational or combat side of war. Today, we incorporate the logistics function into an all encompassing term called combat support. Combat support is an Air Force term derived from the joint term "combat service support" found in JCS Pub 1, Dictionary of Military and Associated Terms. The functions described in its definition include the vast majority of the entire spectrum of support activities in the Air Force. They cut across the areas of responsibility associated with the Combat Support Group Commander, Deputy Commander for Resources, and the Deputy Commander for Maintenance. (29:1)

Up until very recently, the combat support world was not unified by a doctrine that guided its diverse functions. Today, the Air Force published AFM 1-10, Combat Support Doctrine which focused all support elements on warfight-

ing. Shortly after AFM 1-10 was published, the Air Force, after much debate, outlined a logistics concept of operations (CONOPS) to tie-in the major commands and link doctrine to plans, policies, and programs. Combat support doctrine and the subsequent logistics concept of operations determine to a large extent how the tactical air forces (TAF) will support fighting the war. This paper will focus on this relationship and whether current doctrine and the CONOPS are sufficiently guiding the TAF or hindering its ability to conduct combat operations.

I will look at the interrelationship between strategy, logistics, and tactics. This will set the stage for a discussion of logistic principles that evolved from the hard lessons of combat. A brief look at logistics as outlined in AFM 1-1, Basic Air Force Doctrine will lead into a more indepth review of combat support doctrine and the CONOPS supporting it.

Next a discussion of how the TAF combat support elements intend to fight, especially in the NATO arena, will be covered. This will be followed by a critical review of this concept. Finally, conclusions and recommendations will be offered on the effectiveness of combat support doctrine and its concept of operations as a guide to the support of the TAF.

CHAPTER II
STRATEGY AND LOGISTICS

"Everybody likes to talk about and analyze strategy, for there is about it the quality of intellectual contest. Logistics, on the other hand, is the more pedestrian application to war...it does not determine the course of action (but) does set the stage for action and its limits, and often will indicate a preferred course of action."

Huston--Sinews of War

Those that study logistics (combat support) for a living know that all successful strategists have carefully considered the logistical implications of their plans and have ensured that their strategy can be sufficiently supported. Strategy may be defined as "the art of employing the political, economic, psychological, and military forces of a nation to attain national objectives." (24:13)
Military strategy is the comprehensive direction of military power to control situations and areas to attain national objectives. Logistics (combat support) is a system established to create and provide sustained support for weapons and forces so they can be employed to attain strategic military objectives.(24:13)(11:69-70)

It is in this relation to strategy that logistics

takes on the character of a dynamic force and puts life into a strategic concept (10:30) World War II, it has been said, turned out to be less of a strategic game than it was a test of logistics strength.(11:67). Some of the strategic-logistical relationships that surfaced during World War II point out the interdependence between the two. The major high level conferences of the allies (Casablanca, Cairo, and Quebec) demonstrated how strategic decisions were shaped by economic and logistical capabilities and also how logistical planning was shaped by strategic decisions. (10:31)

Eccles, citing a British historian's work, shows that allied strategy from 1941-1943 was determined by the production capability of the US which limited military strategy to offensives on the fringes of the Nazi empire and to holding actions and limited attacks in the Far East. In late 1943, when production capability improved significantly, the level of equipment and supplies available gave the allies the opportunity to switch to a more offensive strategy with its subsequent logistical requirements to gain the initiative away from the Axis Powers. (10:32)

Historical examples of logistics affecting major strategic decisions were clearly demonstrated during the allied conference at Cairo in 1943. Specifically, the Non-

mandy Invasion was delayed one month to allow sufficient buildup of forces and supplies. Additionally, it was decided that the supporting invasion in southern France would be delayed two months because critical landing craft would not be available until after D-Day. (10:35)

On the German side, their defense of Italy and the ultimate success of the allies there was tied to significant logistics factors. It was part of the allies' strategy to destroy the logistical lines of communications (LOCs) necessary to keep the German Army in the fight. By destroying railroads, bridges, ports, shipping, and most major choke points by repeated bombing, the allies limited the Germans to a small percentage of the 5,000 tons of supplies a day required to fight.(24:16) The allies developed a strategy to cut off the German's capability to sustain the fight. The German commander, General Kesserling, developed a defensive strategy that did not fully consider the effect of a disruption of the logistics lifeline on his ability to execute that strategy.

As the above example points out, one of the most often made mistakes in the conduct of war on the strategic or operational level is the failure to adequately plan for logistics. General Eisenhower believed that "battles, campaigns, and even wars have been won or lost primarily

because of logistics." (4:23) There is often a disconnect between what the operational commander wants to achieve and what the logistician can provide.

Again an example from World War II demonstrates how an ignorance of logistics can lead to shortfalls in sustainability. The primary objective during the early days of the Normandy Invasion was to "secure a clear lodgement on the continent from which further offensive operations could be conducted." (26:84) It was evident that not enough supplies and equipment could be moved over the Normandy beaches so sufficient ports had to be secured to allow the movement of the thousands of tons of supplies a day required by the allied armies. Tough German resistance and their destruction of most of the major French port facilities, coupled with an allied decision not to secure the South Brittany peninsula as a second entry point, led to an acute shortage of ammunition, gasoline, and other supplies later in the operation. Some believe that this major limitation prevented the allies from inflicting a decisive defeat on the Germans in 1944. (4:29)

Not fully understanding the complexity of the logistics requirements to support a massive operation like the Normandy Invasion led commanders to underestimate what it took to sustain the fight and how to get the supplies to

where they were needed. The interrelationship between strategy and logistics is almost indistinguishable and affects every level of planning down through the tactical level.

Admiral Eccles described the relationship as three overlapping circles. He believed the decisions of command in all combat situations are a blend of strategy, logistics, and tactics. (11:69) This blend has been termed "Strategics" by Col. Kenneth N. Brown, USA. (7:2) In his essay, he stressed that strategy and logistics are aspects of military capability. They must draw on each other to best prepare military forces to fight for the nation's national interests. (7:9)

CHAPTER III
COMBAT SUPPORT DOCTRINE
AND
THE AIR FORCE'S CONCEPT OF OPERATIONS

What is doctrine? JCS Pub 1 defines doctrine as the "fundamental principles by which military forces or elements thereof guide their actions in support of national objectives. It is authoritative but requires judgement in application." (5:v) Maj. General I. B. Holley, Jr. defines it as that body of knowledge this is officially approved to be taught. Doctrine is the tried and true way to get the best results. (13:9) He goes on to say that unless armed forces are guided by appropriate doctrines, large numbers and superior weapons may not generate victory. (13:9)

Doctrine serves two purposes. First, it gives those who are given the task of implementing a military strategy a foundation upon which they can build their plan. This foundation, based on experience, offers suggestions for carrying out similar operations. Second, doctrine is a guide. It offers a conceptual base from which superiors and subordinates can operate. In the absence of communications or caught in the fog of war, the result of a large operation will have a better chance of success if all involved are guided by doctrine. It guides the development and execu-

tion of the plan. (13:9)

The primary emphasis in studying war has been on the development of the doctrine of employment of forces. The operational (theater, fleet, corps, air force) and tactical (division, battle group, wing, and below) levels of war all have doctrine on how to apply forces to win. Doctrine can also apply and should apply to the combat support or logistical operations of war. Combat support, defined here, is everything that creates and supports combat forces. It is every aspect and function in the logistics system that supports warfighting.

Air Force Basic Doctrine

In the development of a doctrine for combat support, there are many concepts from the operational side of doctrine that are applicable to combat support. AFM 1-1, Basic Aerospace Doctrine, outlines in its Principles of War and in chapter four the basic elements of combat support doctrine. Under logistics, AFM 1-1 requires that a simple, secure, and flexible system be an integral part of an air operation. (5:2-9) It recognizes the critical impact logistics can have on an operation. Also, that combat support is complex and can consume a large amount of a commander's decision making time. In order to keep pace with a combat operation, the system must remain flexible and

provide warfighting capability when and where its required.

(5:2-9)

Basic aerospace doctrine recognizes that all operations are totally dependent on combat support. At every level of conflict, the combat support system must sustain operations and respond to the timing and intensity of those operations. (5:4-10)

The Army's Concept of Sustainment

The Army also believes that combat support is essential to warfighting effectiveness. The concept of sustainment of forces in combat was put forth in an article by the Army Chief of Staff, General Vuono. The concept of sustainment ties in with the Army's AirLand Battle doctrine. The General says that sustainment is an integral part of battle and he proposed a series of imperatives to make combat support a dynamic force in warfighting. The five imperatives outlined by the General include anticipation, integration, continuity, responsiveness, and improvisation. (30:3)

Admiral Eccles made the point that strategy and logistics are interrelated, so too does the Army believe that sustainment or combat support is an integral part of war-

fighting. The Army's AirLand Battle doctrine is based on tenets of initiative, agility, depth, and synchronization. The General believes to make these tenets work the principles of combat support need to blend in with the operational principles of AirLand Battle. (30:5)

Let us look at how the sustainment principles interrelate with the doctrine of AirLand Battle. Anticipation is at the heart of operational planning. It necessitates that the formulation of any plan be influenced by what is "doable." The logistics planner helps develop a supportable plan. Anticipation means knowing the Commander's intent, feeling what is coming next and using initiative and agility in getting the right supplies to the right place at the right time. (30:3)

Integration like synchronization keeps the logistician in the center of current and future operations. He can anticipate requirements and make changes to exploit an opportunity. (30:4) Continuity of combat support means that every aspect of support is focused on the successful execution of the plan. It focuses on the generation of combat power. (30:4)

Responsiveness also supports synchronization. Supporting a commander with all the materials, sequenced in

the right quantities and order will help him decide when and where to use his combat power most effectively. (30:5) Improvisation is the art of providing effective support in unusual circumstances or when operating in a degraded mode. Only through extensive planning, anticipation of potential problems, and practice under realistic conditions can the combat support commander become skilled at handling the unexpected. (30:5)

Other Principles of Logistics/Combat Support

Other doctrinal thinkers have developed their own principles for logistics and combat support based on analysis of military history. Admiral Eccles discusses ten principles: discipline, limitations of resources, underplan-overplan sequence, reserves, priorities and allocations, flexibility and momentum, resonance and reverberation, information, feasibility, and command control of logistics. (11:86)

Of these, command control of logistics is the most important. If a commander does not understand logistics concepts or does not have good information, he will be seriously constrained by logistics limitations. (11:98) Understanding that logistics will always be limited, the competent commander will plan on the basis of logistics limitations and will exercise command control over a flex-

ible logistics system to get the most support out of it. This necessitates that the commander have the same control over allocated combat support as he does over his allocated combat forces. (11:101)

Dr. James A. Huston published sixteen principles of logistics for the Army. The Army's philosophy, he says, is "First With the Most." (15:14) The principles of logistics parallel those of war. Dr. Huston spells out these principles as: equivalence, materiel precedence, forward impetus, mobility, dispersion, economy, feasibility, flexibility, relativity, continuity, timeliness, responsibility, unity of command, information, quality, and simplicity. He categorizes these principals into six areas. These are: logistics and war, positioning materiel, availability of resources, time and space factors, command, control, communications and intelligence (C³I), and excellence in logistics. (15:15)

The relationship between logistics and strategy and tactics is one of equivalence. No distinction in importance should be made between combat forces and combat support forces. When positioning materiel, the concepts of precedence, forward impetus, mobility, and dispersion should be followed. Materiel should be available and ready to move; movement should be forward to keep combat forces

replenished; logistics forces must be mobile to keep combat units supplied; combat support forces and materiel should be dispersed to minimize enemy action and use multiple LOCs.

Under the heading of availability of resources come economy, feasibility, and flexibility. The national economy, military budget, and flexibility in plans and decisions affect the logistics system's ability to support combat forces. Time and space factors in war are relativity, continuity, and timeliness. Being prepared, transitioning from peace to war with no fundamental changes in operation, and being ready to take advantage of an opportunity on the battlefield are all examples of time and space factors.

The next three principles, responsibility, unity of command, and information, are related to C³I. Every combat support task is the clear responsibility of someone. Their performance is accountable. Commanders are ultimately responsible for their subordinates' performance. Logistics is a function of command. Control of logistics is essential for the control of strategy and tactics. A single authority should be responsible for logistics. To enhance control of combat support, accurate and timely information must be available to the commander so competent decisions can be made. The last category centers around excellence in

logistics and effectiveness in combat. Keep quality high and keep it simple.(15:14,15)

Col. Brown in his essay, Strategics, believes the overriding principle of logistics and combat support is responsiveness. Responsiveness is the synergistic catalyst between strategy and logistics. Strategic and, for that matter, tactical success will be proportional to the logistician's ability to respond.(7:10) At the operational art level of war, everything entailed in combat support must be ready and able to respond to the needs of the combat forces. Through a centralized command and control system, the logistician can respond to needs faster and with greater flexibility, shifting support resources across the battlefield. Working with uncertainty, combat support commanders must know the operational commander's intent so they can recognize and exploit opportunities to win.(7:25,27,34)

Air Force Combat Support Doctrine

The Air Force recently developed its own logistics support doctrine. Called Combat Support Doctrine, it is outlined in AFM 1-10. It does not differentiate between elements of support, preferring to combine all the non-operational aspects of the Air Force into one category-- combat support. In its widest application, combat support is the art and science of creating and sustaining combat

capability.(9:1-1) The newly written combat support doctrine describes a complex process by which combat operational needs are met. This process is composed of eight sub-processes that make up its basic elements. The processes are: definition, acquisition, maturation, distribution, integration, preservation, restoration, and disposition. They are all interrelated and make up the entire support process encompassing the life cycle of an aerospace system. (9:2-1)

How combat capability is created and sustained is distilled into eight principles which act as a guide. These eight principles are gleaned from the operational principles of war and from the work cited above on support doctrine. The principals that guide Air Force combat support are: objective, leadership, effectiveness, trauma/friction, balance, control, flexibility, and synchronization.(9:3-1)

As with Huston's sixteen principles, the Air Force has categorized their list, as well. The categories are direction, external/internal influences, and means of perfecting combat support. The principles of leadership, objective, and effectiveness relate to the direction given combat support forces. Trauma/friction encompass the external and internal forces at work against effective support. Balance, control, flexibility, and synchronization

focus on the methods of perfecting the functions of combat support.(9:3-1)

These principles will guide the combat support commander in his quest to provide the best support possible to the combat forces. Indeed, the main overarching objective of combat support is to give force commanders the greatest flexibility possible to deploy and employ aerospace forces. A brief definition of each principle will demonstrate how each achieves this objective and will also show the similarity with principals already cited in this paper.

The principle of objective has three requisites: state the objective clearly, ensure everyone knows the objective, and never let anyone lose sight of the objective. Coinciding with this is leadership. Leadership may be the single most important factor in war. In reaching the objective, doing the right thing and ensuring things are done right are key elements of leadership.(9:3-2) Doing the right thing means being more effective in combat. The final question to ask in deciding how effective peacetime policies and procedures are likely to be is: Does it enhance combat power?

There are many influences that affect operations in war. Clausewitz stated that even the easiest tasks are

difficult in war.(8:121) The fog surrounding war creates uncertainty. Combat support forces must be ready to operate in the fog with friction, trauma, and uncertainty all around. Being able to transition from peace to war rapidly and operate independently in a self-sufficient mode with well trained troops will lessen the impact of the "hell" of war.(9:3-3)

Balance, control, and flexibility go hand-in-hand and determine how smoothly and efficiently combat support is provided. Effective resource allocation means the right materiel gets to the right place at the right time. A balanced distribution system regulating the flow of supplies into the theater can ensure that combat capability is sustained across the battlefield. Here control is essential. Knowing the location of combat support resources is as important as having them within reach. Centralized control utilizing accurate information and decentralized execution can increase combat effectiveness. A responsive command and control (C²) system gives combat support forces flexibility. Combat support forces need to be able to meet any contingency with a flexible force structure. They need to be mobile and survivable so they can meet any requirement worldwide.(9:3-5)

The essence of combat support is the creation and sus-

tainment of combat capability. When combat support and combat operations work together in unison, they achieve combat power.

COMBAT + COMBAT = COMBAT
SUPPORT OPS POWER (9:3-6)

This synchronizing effect not only relates to cohesive Air Force operations but also to joint and combined operations. Through planning, training, and exercising, the synchronization of all combat forces, support and operational, will increase combat power.(9:3-6)

Combat Support Concept of Operations

After the development of a combat support doctrine, it became apparent to Air Force senior logisticians that a linkage was needed between combat support doctrine and the plans, programs, and policies required to sustain and create combat capability. This linkage was the development of an Air Force Logistics Concept of Operations (CONOPS). This CONOPS provided a definition of how the Air Force should posture combat support to meet the tactical air forces' wartime operational requirements. It provided the basis for subsequent Air Force, MAJCOM, and theater decisions on how to improve combat power through combat support.(28:1)

Based on the current combat support doctrine and antic-

ipated deficiencies in the Air Force's current support capability certain assumptions were made. These assumptions included:

1. Strive for maximum self-sufficiency.
2. Strive for flexibility across the spectrum of conflict, anywhere in the world.
3. The basic fighting unit is the squadron/base with its combat support structure.
4. Resources will be limited.
5. Be ready to share resources globally to meet uncertainty.
6. Control of resources is with the theater/unit commander (unless precluded by #5)
7. Recognize and plan for mutual support between allies and other services.
8. Accomodate damage to logistics resources.
9. Energize the depot system at the start of conflict, utilize its vast resources.
10. Provide continuous flow of resources to combat forces.
11. Everything entailed in combat support should respond directly to operational requirements. (28:2)

With these assumptions in mind, nine primary elements were developed forming the basic framework for the logistics CONOPS. These elements provide a sound basis for the formulation of logistics/combat support concepts at the operational art level. They incorporate the principles of combat support outlined in the doctrine. The nine elements are: command and control, mutual support, depot support, forward support, joint/combined support, strategic transportation, theater transportation, mobility, and air base operability.

Command and control (C²) has been characterized as the "steel thread" that connects the many elements of combat support.(28:2) The logistics principle of control demands that the C² system be simple, secure, and responsive to the demand for information. It is imperative, during war, that commanders know what information they need to make accurate decisions. A C² system must be in place to pass critical information upward so that timely orders can be passed downward.

A strong C² system must ensure that combat power is enhanced by mutual support. Although maximum self-sufficiency is the goal, in war, it will not always be possible to attain. Combat losses, destroyed equipment or supplies, and death and injury will necessitate support from internal and external sources. Uncertainty will put demands on the combat support system. Commanders at all levels must have the flexibility and capability to move resources and manpower to meet operational needs. USAFE plans to use a Logistics Decision Support System to tie in with theater and unit logistics C² cells. It will be proactive and help make the theater level decisions on priorities for scarce resources. (1:1-8)

The concepts of forward and joint/combined support enhance mutual support. By having resources in the theater

closer to the battlefield, it is easier to anticipate and meet changing requirements. Imagination and planning are required to overcome the problems associated with forward and joint/combined support. The flexibility and responsiveness gained by these efforts could mean the difference between successfully exploiting an opportunity or missing it.

On the homefront, timely depot support is critical to initial force readiness and will be critical to sustainability. Through a quick transition from peacetime to wartime operations, the depots can enhance unit self-sufficiency and reduce the reliance on short supplies of prepositioned materiel.

Essential to effective support by depots, other services or allies, and Air Force units is reliable and sufficient transportation. Strategic airlift/sealift assets are limited. Commanders must articulate what resources are critical to executing operational plans and ensure they are properly prioritized in the strategic flow of materiel from the CONUS to the theater. Intra-theater transportation includes every available means of movement. The primary objective is responsiveness. Resupply and redistribution requires effective command and control, flexibility, and

ingenuity in accomplishing this essential element of combat support.

Mobility is a key element of the Air Force's doctrine. It is inherent in the concepts of speed and flexibility. To achieve effective mobility, sending the right forces with the right equipment and supplies to quickly launch combat sorties must be planned and practiced. Additionally, potential damage and disruption by enemy forces may require combat and combat support forces to be able to withdraw from a base and relocate at an alternate base. Local and theater commanders must have prepared plans to handle these contingencies. (28:2,3)

Since the Air Force's inception, it has operated from relatively secure air bases. In a future war, this luxury may not be available. Termed air base operability, this concept puts the most responsibility on the combat support structure. It entails a unit's ability to fight as a cohesive force. It addresses the unit's ability to launch sorties during and after attacks, generate forces en masse, defend the air base, and provide resources to fight the war. The ability to fight from the air base is at the crux of the projection of aerospace power. If air forces cannot get off the ground or have a place to land where they can be refueled, rearmed, and repaired for subsequent sorties, they

have lost their effective combat power. Achievement of maximum combat support at the base level is one of the primary tasks of theater and unit commanders and logisticians. (28:2-3)

Combat Support for the TAF

As stated in the combat support CONOPS, the squadron and air base remain the basic fighting unit for the TAF. The Air Force studied the concept of fighting from the air base under Project Relook. The study looked at a specific European (NATO) environment. In war, the NATO central region would be characterized by violent, varied, and numerous attacks against air bases and support facilities. (2:4) The geography is relatively shallow and air bases well within the combat radius of most enemy weapons. The LOCs are also vulnerable and will be saturated reducing timely flow of resources and information. (22:4) It is without a doubt one of the worst areas to conduct air operations. However, if a feasible concept of operations was developed here it might have some suitability in other less dangerous environments. The PACOM and CENTCOM regions have geographically more space to move and different threats to meet. LOCs are longer and base base locations are prevalent. Self-sufficiency in combat support is still required. (1: Sec 5)

To fight effectively from the air base, the unit must be self-sufficient to the maximum extent possible. The term "maximum" means relying less on the external elements of combat support that will be most vulnerable to disruption by the enemy: resupply and external O3.(22:5) The time period envisioned is roughly a two week period. Self-sufficiency enhances the principle of forward support by putting the assets where they are needed to generate combat power. Achieving maximum self-sufficiency relies on a number of critical elements to be in-place before the start of hostilities.

The first of these is an organic combat support capability. It means a sufficient maintenance capability for aircraft, equipment, vehicles, utilities, facilities, and pavement. In equipping and supplying these functions, everything required to be self-sufficient should be provided to in-place or deployed forces.(22:5)

Second, supply from external sources should be minimized early in the conflict. Deploying with war reserve supply kits and forward supplying sufficient consumables (fuel, munitions, and food) to the base will put less stress on the critical LOCs and transport. It will also help minimize the enemy's effort to disrupt the rear area. Dispersal of assets lessens the impact of air base attacks

and establishing redundant internal LOCs enhances the survivability of those assets. Capitalizing on mutual, joint and combined support and available organic ground transportation, a unit can enhance its self-sufficiency. Organic ground transport provides flexibility to move personnel and resources around the base. It provides movement along valuable internal LOCs which connect dispersed operations. It enhances the mutual, forward, allied, and joint support concept by giving the unit a means of getting off-base resources without relying on external transport. (22:5)

Third, to remain self-sufficient, commanders must be able to provide the command and control essential to supporting and fighting the war. Making those critical decisions relies on accurate and timely information. Using all available means to transmit prioritized information so commanders can make rapid decisions to fight the war is mandatory.(22:5)

For example, using the Combat Supply System (CSS) and the Combat Supplies Management System (CSMS) as an integrated support system will give commanders real-time status of their supplies, WRM, and equipment.(17:29,30) CSS is a portable computer that can be used under less than ideal conditions. It is especially useful for deployed units but can be used under dispersed operations. The CSMS

is software that can give visibility to critical line items or reparables for commanders at all levels.(17:23)

Another C2 tool under operational testing is the Wing Command and Control System (WCCS). It provides secure real-time C2 information to Wing decision makers to enhance combat sortie generation. The WCCS links all vital hubs of Wing activity. Implementation of this system into the TAF is due this year (1989).(1:Sec 5)

Fourth, survivability is key to maximum self-sufficiency. If the bulk of a unit's resources or personnel are destroyed or put out of action that unit will not remain in combat for long. Preservation of the elements of combat power through hardening, dispersal, and deception will minimize losses and sustain the ability to fight. (22:5)

Fifth, the people providing the will and know-how to prosecute the war are the most important asset. A finite resource, the skills of the men and women assigned to the unit may make the difference in war. Looking after their welfare and morale by providing secure quarters, medical facilities, and edible food in combat is important. Taking care of casualties both physical and mental will demand great courage.(6:40)

Improving personnel self-sufficiency can be accomplished by combining the skills of mechanics and technicians.

Initiatives like Rivet Workforce in the maintenance community can result in better flexibility by cross-training similar skill requirements. Better training in combat related skills such as marksmanship, self-aid and buddy care, base defense, explosive ordnance identification, and chemical defense will improve a unit's ability to defend itself and fight through the trauma of war.

Col. Kneiger, in his article "Fighting the Air War: A Wing Commander's Perspective," sees the same imperatives outlined in Project Relook as being important to him. Before he can fly the air tasking order (ATO), the combat support side of his unit must be up and running. The air base needs to be secure, aircraft must be available, loaded, and ready to fly, supplies must be available to sustain the generation of multiple sorties, and sustain the personnel needed to fight.(18:22)

One of the primary tasks of the unit after an enemy attack is to recover and get back into action. The Security Police, combat engineers, firefighters, and explosive ordnance disposal teams are the primary players. Time is important so it may be necessary to augment the experts with personnel trained in secondary jobs of debris removal from runways and taxiways, base defense, and firefighting. This

type of team effort will be necessary to bring the base back into action rapidly. (22:6)

Once the base is secure, the aircraft maintenance and munitions teams provide the means to fight. Having the right munitions in the right amounts takes time. Close coordination with unit weapons officers and knowing the commander's intent through the ATO can ensure the right bombs are available.

Generating, launching, and regenerating jets to meet the ATO is an aircraft maintenance unit function. The pace will be hectic for those bases open and operating after an attack. Command and control will be critical. Communications problems will provide friction. Supervisors will have to know the plan and ensure their subordinates know their piece of the action. Timing and taxi routes will be crucial to minimize aircraft and personnel exposure while ensuring a mass launch gets off on time. (18:24) A simple, flexible, and effective C² system will ensure the key decision makers remain in the loop. It will also ensure there are redundant supervisors who know each other's responsibilities and can fill-in to execute the plan and fight the war. (25:39-41)

CHAPTER IV
DOCTRINE: GUIDANCE OR HINDRANCE?

The Air Force's Combat Support Doctrine is relatively new. It grew out of AFM 1-1 but also had its roots in sound logistical principles, as outlined in the above chapters. The doctrine has served to focus the attention of those in the combat support specialties on warfighting as a team. This manual serves as a basis for developing a coordinated effort in supporting those on the "pointy end" of the spear. This development of a warrior mentality in peacetime can cure an ill that is all too common in today's combat support "eight-to-five" world.(12:10)

Exercise Salty Demo demonstrated that our peacetime organization and attitudes did not fully measure up under simulated combat conditions. The perspective tended to be stovepiped along functional and technical lines. The "union card" mentality prevailed in many minds.(29:2)

Combat support doctrine outlines several principles that clearly should eliminate this type of thinking. Furthermore, the doctrine is relevant in orienting the various combat support functions toward the goal of projecting combat power. The new manual was clearly needed and has

already focused the combat support community on their mission, combat support for operations.

One of the roles of doctrine is to influence how the Air Force and the TAF, in particular, will fight in the future. The principle of effectiveness guides a fighting force to do only those things that improve combat capability. If the doctrine and a concept of how to operate under that doctrine clearly dictate that the key to success in war is to organize like you plan to fight, doesn't it make sense to reorganize our TAF more effectively?

A suggestion, put forth recently, takes the tri-deputy system found in most Wings and reorganizes it around combat functions. These combat functions are combat projection, base operations (operability), replenishment, and services. (29:3) Other studies, like Salty Demo and Relook, also suggest a reorganization to support demanding combat operations may be necessary. The doctrine and CONOPS both give the Air Force and TAF the flexibility to develop a more combat oriented support structure.

The doctrine calls for a well-trained and tested combat support force. The training process should instill the war-fighting mentality into Air Force personnel. The problem in today's Air Force, with the heavy emphasis on technology, is the tendency to overspecialize in one area. Specialization

is required in some areas but when combat support forces get tunnel vision and lose sight of the objective then the synchronization is gone and the war is lost. The doctrine identifies a continuing need to relate combat support to warfighting. It also stresses avoiding excessive functional specialization. (12:11)

The need then is to teach combat support leaders and supervisors about the body of knowledge surrounding combat support doctrine. The Combat Logistics course conducted by AFIT is an excellent example of this concept. (12:12)

However, the process of building a warrior spirit and an understanding of the doctrine and its concept of operations could really start at the basic technical schools and PME courses. The majority of Air Force personnel fall into the various combat support functions; during training, many personnel would be reached and exposed to these important concepts.

For a doctrine to be viable it must be tested. Combat support doctrine, as currently printed, has not been tested by war. The CONOPS derived from it, although based on realistic assumptions, has likewise not been tested under fire. In peacetime, only realistic exercises and war games can approach the uncertainty and turbulence of war. Efforts like Silver Flag and Salty Demo are geared to testing combat

support forces and are a step in the right direction. However, most units practice operations oriented scenarios, where minimizing the impact of ground forces on flying sorties is the rule. (25:42)

Testing a unit's sustainability would give Air Force and TAF leaders a better picture of how well a unit has mastered the tenets of combat support doctrine. (25:42)

Assessing such things as self-sufficiency, ground and air transportation flexibility, mutual support between bases, the functions of theater logistics C², and air base survivability are crucial in getting a realistic view of the TAF's capabilities to fight. It will take an innovative approach to exercise planning and funding to accomplish this task. To ensure the Air Force and TAF are heading in the right direction with their doctrine, realistic tests are required to identify weak areas. Waiting until the war starts is no time to discover that the doctrine and its tenets are faulty.

One area of doctrine that may be a hindrance is the concept of the air base. For over 50 years, the air base was considered a secure sanctuary. (3:16) Now much attention has been placed on its survivability, especially in NATO, PACOM, and CENTCOM. Improvements in the threat from the Soviet forces and their allies questions the ability of the

TAF to generate enough combat power to meet theater requirements. The TAF CONOPS addresses air base operability as vital to projecting air power.(3:16)

Another test of this concept and a test of the implementation of the recommendations resulting from Salty Demo will be conducted in 1991. Called Exercise Constant Demo '91, this test will scrutinize most of the doctrinal concepts surrounding the air base.(3:16) Preparing for this exercise will entail ensuring all the recommendations of Salty Demo are accomplished. Also, the formulation of a realistic unit based plan using the basic combat support doctrine and the CONOPS developed by the theater MAJCOM (USAFE) will be done. Once the plan is developed, tough practice must take place to ensure the synchronization and cooperation between units is ingrained in everyone. Finally, sufficient funding must be available to support preparation for and execution of the test.

Some believe that the air base is in jeopardy and the TAF doctrine assuming fixed bases is outmoded.(6:32) Others believe that costly initiatives designed to enhance the protection, survivability, recovery, and regenerative power of the air base should be pursued. The most important features of these programs include: plans to construct an Alternate Launch and Recovery Surface at each USAFE base,

provision Emergency Landing Strips at selected sites in Europe, dispersal of facilities, camouflage and deception, installation of Survivable Collective Protection Shelters... mobile aircraft arresting gear, redundant base communications, and better backup power systems.(31:44) The consequences of not proving that fixed bases are a viable part of doctrine will affect future plans and programs and ultimately the TAF's ability to fight effectively. A tough accurate test of this concept must not be compromised.

Doctrine not only dictates how the Air Force trains but also should serve as a guide for long term planning. The Air Force incorporated the basic foundation of combat support doctrine into its Logistic Strategic Planning Guide (LSPG) for the fiscal period 1990-2004. It acknowledges the interdependence between strategy, logistics, and tactics. To meet future warfighting requirements, it states, will require a cohesive combat support strategy. Two fundamental concepts characteristic of this support are found in basic combat support doctrine:

1. The ability to develop, deploy, and employ responsive combat ready forces worldwide.
2. The ability to survive and sustain combat capability for the duration of the conflict.(20:3,4)

The LSPG also incorporated the combat support process and environment essential to planning a long range strategy.

It also uses doctrine as a guide to develop a logistic vision. The seven characteristics of that vision are listed below:

1. Warfighting Oriented--Organize for wartime operations. Be ready to rapidly transition from peace to war.
2. Mobility--Essential to the projection of air power, resupply, and distribution of support. Provides flexibility, implies less reliance on fixed air bases.
3. Flexibility--Response across the entire spectrum of war. Innovative with respect to limited resources.
4. Operability--Incorporates 2 & 3 above and adds survivability, recovery, and reconstitution to continue sustainment.
5. Supportability--New weapons systems must be supportable. Early logistics planning for contingency operations and the design of new weapons must take place.
6. Capability Assessment--Get better at predicting the impact of logistics on readiness and support of war plans. Give better information to decision makers.
7. Resource Control--Pursue an acquisition and management strategy that improves combat capability. Shorten lead times, lower costs, and control resources better.

(20:6,7)

This particular guide was printed before AFM 1-10 was distributed. It tracks very close to the doctrinal principles and processes outlined in AFM 1-10. One suggestion would be using the same terminology in all logistics/combat support documents. This would keep a consistent interlocking thread between the basic doctrine, the CONOPS at the various levels of command, and the policies, plans, and programs developed to create and sustain aerospace forces.

CHAPTER V
CONCLUSIONS AND RECOMMENDATIONS

This paper critically analyzed the development of basic combat support doctrine and the resulting Air Force CONOPS used primarily by the TAF. There are several conclusions outlined in the paper that will be clarified and summarized. Also, several recommendations will be presented to improve how doctrine is taught by the Air Force and implemented by the TAF.

Conclusions

The basic question of this paper was: Is the present combat support doctrine and the resulting CONOPS guiding the TAF correctly? The answer is a qualified yes.

First of all, a coherent combat support doctrine was badly needed. Other services have formalized logistics doctrine to support their operational doctrine. The Air Force needed to formalize its principles and doctrine to align it with basic aerospace doctrine. This process strengthens the relationship between the operational and combat support communities.

Another benefit of formalizing doctrine is that it gives direction to a diverse and functionally divided community. It brings together the synergistic effects of the various parts and eliminates the "union card" mentality. Doctrine forms a basis from which professional military and

technical education can create a more cooperative force, aware of how their function or specialty fits into the combat power equation.

The publishing of combat support doctrine has generated debate among the community on its content. This is healthy and will help the further refinement of doctrine. One such debate centers around the TAF's organizational structure. The TAF is not organized as it intends to fight. A functional look at the type of organization needed to meet operational support requirements is required.

Doctrine guides how the Air Force intends to operate and fight. It allowed the development of a CONOPS that was general in nature for all aspects of the Air Force. This CONOPS was oriented towards supporting the TAF. Doctrine and the Air Force CONOPS provided the link to theater and MAJCOM development of specific concepts supporting the employment of forces in their area of responsibility. Each MAJCOM was tasked by the Air Staff to develop a CONOPS supporting a unified commander's air operations. The results of which should be drafted this year.

For the TAF, a CONOPS helps orient everyone to the present. It anticipates and projects near term limitations and gives warriors a frame of reference to develop current plans guided by doctrine to meet operational taskings. It also

helps identify shortfalls in resources, equipment, and force structure.

The TAF CONOPS has come under fire by some who see the vulnerability of the air base as a severe limitation. Doctrine may be flawed. The air base concept was born out of years of relative security and perpetuated by high sunk costs in infrastructure. Proponents of the air base say it is survivable and can continue to function in today's high threat environment. Others believe the TAF is locked in to fighting from fixed locations and may not be able to generate the combat power necessary to win. A resolution to this debate must be found to ensure the doctrine continues to guide the TAF correctly. Constant Demo '91 may help.

Recommendations

The Air Force accomplished a huge task by publishing a doctrine that ties all the functional areas of combat support together. It made whole a fragmented community. There are several initiatives already underway to further develop the concepts of operation for the various MAJCOMs and unified commands. These initiatives should continue and should generate debate from across the combat support community.

A study should be undertaken to review the tri-deputy command system found in most Wings. It should center on warfighting skills, how units go to war, the effectiveness of the command system, and its functional alignment.

The AFIT Combat Logistics program is an excellent step to further logistics and combat support knowledge. However, it can not reach everyone who could benefit from it. Expand combat support education to teach doctrine and the CONOPS to our supervisors and leaders at technical schools and PME centers. Include the historical lessons learned from past wars and how they may be applied today. Also, show how the other services and allies view combat support.

Finally, test the doctrine under realistic pressure. A doctrine tested under combat conditions is a valid guide. In the absence of war, realistic tough exercises and simulated war games can produce a validation of doctrinal principals and concepts.

The Air Force's combat support doctrine and its resulting CONOPS provided long needed guidance to the TAF support community. If it is not continually tested and validated as the technology, threat, and environment change, it could become a hindrance and lead to defeat instead of victory.

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