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TOWARD THE FUTURE OF THEATER AIRLIFT DOCTRINE: CASE
STUDIES OF THEATER AIRLIFT DOCTRINE IN OPERATION UPHOLD
DEMOCRACY AND OPERATION JOINT ENDEAVOR

BY

MAJOR DONNIE G. DAVIS, JR.

A THESIS PRESENTED TO THE FACULTY OF
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The conclusions and opinions expressed in this document are those off the author. They do not reflect the official position of the US Government, Department of Defense, the United States Air Force, or Air University.

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Preface

Major Donnie G. Davis, Jr. was commissioned through Officer Training School in 1984. Graduating from Undergraduate Navigator Training, he went on to Dyess Air Force Base in 1985 as a navigator in C-130s. Following an assignment as a Tactical Airlift Liaison Officer for the 1st Cavalry Division in 1988, he returned to the C-130s. He was assigned to the 37th Tactical Airlift Squadron at Rhein Main Air Base, Germany. In 1991, after eight months in Operation DESERT SHIELD and Operation DESERT STORM, he was reassigned to the US Air Force's Joint Operations Training Division at Little Rock Air Force Base. Prior to his assignment to Air Command Staff College in 1996, he was assigned to Headquarters Air Combat Command Airlift Operations Division. Major Davis is a master navigator with over 3100 flying hours. He has a bachelor's degree in Professional Aeronautics from Embry Riddle Aeronautical University, and a master's degree in Operations Management from the University of Arkansas. Major Davis spent six years in the United States Army prior to joining the Air Force.

Introduction

We have learned and must not forget that, from now on, air transport is an essential of airpower, in fact, of all national power.

General Hap Arnold
1945

Airlift doctrine underpins America's ability to deploy forces rapidly around the globe. It does so by providing a foundation of rules, guidelines, and procedures to guide the planning, preparations, and execution of airlift operations and supporting activities. The goal of this study is to test the adequacy of current doctrine by examining Joint Publication 3-17 *Joint Tactics, Techniques, and Procedures for Theater Airlift*. The study's approach will be to examine the salient doctrinal propositions of JP 3-17 against the backdrop of two recent contingency airlift operations. This examination will provide the foundation required to assess the accuracy, completeness, and warfighting usefulness of those propositions.

Acknowledgement

I would like to acknowledge several people without whose support and help I would never have gotten off the ground with this study. I want to thank Colonel Robert C. Owen, Dean of SAAS, for his direction and guidance in selecting the project, and more for his untiring efforts in reviewing the study along the way. Also, I thank Dr. Harold Winton for his words of encouragement throughout this journey. Also, without his patience reading numerous drafts of the thesis and correcting untold grammatical errors, I could have never finished.

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Abstract

Recent operations in Haiti (Uphold Democracy) and Bosnia (Joint Endeavor) demonstrate continued reliance upon theater airlift to support military strategy. The current doctrinal guidance for airlift operations is contained in *Joint Publication 3-17 Joint Tactics, Techniques, and Procedures for Theater Airlift*. Since JP 3-17 was drafted, the Air Force has been engaged in numerous major theater airlift operations. Though all of these share similarities, each is unique. The intent of this research is to assess the validity of current doctrine by comparing six propositions of *Joint Publication 3-17* with the lessons of recent case studies. Due to time and space limitations, this research will focus only on the airlift operations conducted in Haiti and Bosnia. These two examples represent significant variation in airlift operations to demonstrate the diversity required of joint doctrine. Haiti reflects a planned, large-scale, mass-tactical airdrop launched from the United States. Bosnia reflects long-term employment of numerous airlift operations. Lessons from both help either confirm or identify the validity of current doctrine.

Chapter One

The Study

This study examines the adequacy of current joint airlift doctrine and suggests areas where it requires clarification to make it a more effective guide for operational planning.¹ The study's central methodology identifies key areas of current joint doctrine and, by testing the elements of doctrine against two recent case studies, determines where deficiencies exist. The case studies, Operation UPHOLD DEMOCRACY (OUD) and Operation JOINT ENDEAVOR (OJE), provide recent examples of the use of strategic and theater aircraft to project joint military forces rapidly. Although both operations were successful, the airlift operations revealed problems that caused inefficient uses of the airlift system and aircraft and delayed delivery of forces and equipment. This study concludes with doctrinal implications of these shortfalls.

¹ The current definitive doctrine for "joint" airlift operations is *Joint Publication 3-17 Joint Tactics, Techniques, and Procedures for Theater Airlift Operations*. 18 July 1995. This doctrine is one element of the joint doctrine publications system and therefore is the primary source for airlift operations within and between services. In addition to JP 3-17, other USAF doctrine manuals cover airlift operations, specifically Air Force Doctrine Document 30, 28 April 1995. AFDD 30 supplements and even expands many of the concepts in JP 3-17. However, this study reviews only the doctrine in JP 3-17.

This study uses Joint Publication 3-17 *Joint Tactics, Techniques, and Procedures for Theater Airlift (JP 3-17)*, as the definitive baseline of current joint doctrine and uses the two case studies as the evidence for assessing doctrine. The doctrine prescribed in JP 3-17 contains the basic concepts, categories, and methods of delivery common to airlift operations and includes the six elements of airlift doctrine examined in this analysis. They are user requirements; planning; terminal requirements; command, control, communications, and computers (C 4); capabilities of airlift forces; and methods of airlift delivery. Their importance derives from their fundamental influence on airlift operations and their appearance in both case studies as areas where most operational problems occurred.

During the examination of the two case studies in chapters two and three, the discussion focuses on these six elements of theater airlift doctrine. Each case study begins with a section on "airlift user requirements," to establish mission objectives and to determine what, where, when, how, why, and who required theater airlift support. Next, "planning," as a doctrinal element, begins the process for crafting an airlift operation during the "planning phase" of the operation.² Also during the planning phase, the elements of C 4, terminal

² Although not intended to be confusing the use of the term planning has two definitions relevant to the remainder of this discussion. First, "planning" is an element of doctrine. The characteristics of the planning element of joint doctrine are presented during the "elements of analysis" section of this chapter. The second use of "planning" regards the time phase of an operation. In both the case studies the phases of operation are presented in the "planning" or "execution" phase. This phasing helps identify chronologically, in the sequence of events, where

requirements, capabilities of airlift forces, and methods of airlift delivery reveal the details of planning. Chapters two and three chronologically describe the facts of the operations as they evolved. Each case study also includes preliminary doctrinal observations and analyses relevant to the question of whether current joint airlift doctrine is sufficient for future operations.

Chapter four consolidates the observations from chapters two and three, then ties them directly to the doctrine in JP 3-17 for analysis and implications. The intent of this chapter is to determine the adequacy of the current joint airlift doctrine. Through this determination of adequacy, the foundation is established for how future doctrine should be changed to reflect the insights gained from OUD and OJE. These changes should allow airlift planners and operators to accomplish their missions more effectively.

Elements of Analysis

Joint Publication 3-17 is structured similarly to an operator's manual, i.e., it provides a sequential list of considerations and factors necessary for successful theater airlift operations. This section establishes the salient characteristics of the doctrinal elements of JP 3-17 and lays the foundation for the case study reviews in chapters two and three.

certain actions occurred. The use of the term "planning" as an element of doctrine does not exclusively limit all planning action to the planning phase of the operations.

Airlift User Requirements

The principal reason for the existence of theater airlift is to support the plans of the Joint Force Commander (JFC), or as JP 3-17 refers to him, "the geographic combatant commander."³ Once a JFC apportions airlift in support of a specific user, the details of the user's requirement shape airlift planning. User requirements link components of the theater airlift system to the overall mission objective. Fulfilling these requirements requires not only an understanding of the overall objective, but also the independent requirements of the individual users and the capabilities and limitations of the airlift system.

Therefore, users set the framework for an airlift operation by defining and articulating requirements: how many forces, what type, and where and when they require delivery. To this end, details of the users' requirements surface as the first vital piece of information for determining the size, scope, and type of theater airlift support.

To convey the users' requirements to the airlift planner, a process must exist. A formalized process ensures the users' requirements are supportable by the aircraft available, the users' timeline for delivery is achievable, and the user itself has adequately validated the forces requiring movement. For operations within a theater, JP 3-17 provides lines of validation and request approval from the user to the airlift provider.

Although JP 3-17 recognizes that "service components establish their own procedures for requesting and validating" airlift support, it does not advocate one

method over another.⁴ Nor, once requests are validated, prioritized, and approved, does JP 3-17 mandate a mechanism for transmitting or relaying the approved requests to the airlift planner. However, there is a formal transmittal document used elsewhere in strategic mobility operations. This document, known as the Time Phased Force Deployment Data (TPFDD) document, was used during both OUD and OJE.

The TPFDD establishes a formal method for transmitting requirements into airlift sorties. The TPFDD, however, is more than a list of forces to be picked up and delivered. In addition to force composition, it also states the time and place of pick up and the time and place of delivery. The vital data in the TPFDD provides information that allows airlift planners to craft plans, designate aircraft type and commitment rates, and determine required support equipment. In short, the TPFDD, or some mechanism like the TPFDD, is essential to airlift operations and links the user to the airlift system. Without it, all airlift planning is based on guesswork of the user's needs.

User requirements vary. They include considerations such as cargo classifications, total force size, method of employment (tactical or permissive), concept of employment, and the user's own doctrinal requirements. Each of these elements further shapes the unfolding airlift plan and planning. They determine specifically what type and how many aircraft must be committed to the operation, what terminal requirements are needed, what C 4 links must be made between the

³ Joint Publication 3-17 *Joint Tactics, Techniques, and Procedures for Theater Airlift Operations*. 18 July 1995. P. I-2.

⁴ JP 3-17. P. III-3.

user and the aircraft provider, and the aircrew qualifications for the chosen method of delivery.

Planning

Planning is at the heart of any successful airlift operation. In its early phases, airlift planning identifies the relationship of the airlift effort to the overall plans and operational concepts of the Joint Force Commanders (JFCs) and subordinate component commanders. As it develops, airlift planning establishes an interconnected and iterative relationship between the plans of these higher commanders and the capabilities of available airlift forces. Airlift capabilities, in other words, often constrain or restrain the practical boundaries of operational planning. Effective planning also helps commanders and staffs anticipate and provide for the myriad support requirements of airlift operations. Finally, airlift planning includes determinations of the measures of merit and appropriate risk-benefit calculations of airlift operations. "Clearly, details of planning and, it follows, the details of planning doctrine, influence the outcome of any airlift operation."⁵

JP 3-17 prescribes that all airlift planning must be conducted in conformity with the overall tactical and logistics plans and the operational concepts of supported Joint Force Commanders and their subordinate component commanders. Of the issues that airlift planners must address, several are essential to any operation: the time available for planning; the nature, size, and scope of the

airlift effort; the planned method(s) of delivery; and whether the airlift operation is a one-time surge or a long term build-up and sustainment operation. These questions allow initial assumptions about the type of airlift operation to be made, as well as determinations of the resources and assets required.

To facilitate clear and expeditious planning processes, JP 3-17 distributes planning responsibilities, particularly between staff organizations and commanders.⁶ Although most airlift planning is conducted by a support staff within the Air Operations Center (AOC) Airlift Coordination Cell (ALCC), commanders also have far-reaching responsibilities as well. Command responsibilities for planning include developing intelligence, assembling participating forces, accomplishing training, and establishing security measures. Along with the tasks of planning, directing, and controlling forces, the commander is also responsible to ensure that all planning and subsequent actions achieve unity of effort to accomplish the airlift and operational objective. The commander sets the tone for all planning by clearly articulating his intent, clarifying the objectives, and defining the assumptions and parameters that will frame the planning effort.

Joint Publication 3-17 also describes many of the planning factors relevant to airlift planning, though again at a level of fidelity consistent with its role of providing “guidance” rather than “direction.” Considering the elements of

⁵ Owen, Robert C. Colonel. USAF. “Discussion on the Elements of Doctrine.” 23 March 1998, School of Advanced Airpower Studies, Maxwell AFB, AL.

⁶ Joint Publication 3-17 *Joint Tactics, Techniques, and Procedures for Theater Airlift Operations*. 18 July 1995. Chapter IV.

command, control, communications, and computers (C 4), user requirements, terminal requirements, aircraft capabilities, and method of delivery, airlift planners develop airlift flying and support operations. The process for incorporating these factors into the airlift plan is iterative and continues even after the operations begin. These planning factors, further detailed below, set the stage for the case studies that follow in chapters two and three.

Command and Control

Joint Publication 3-17 presents two aspects of command essential for successful theater airlift operations. The first of these is command and control (C 2) of forces; the second is command, control, communications, and computers (C 4). These two elements, addressed separately in JP 3-17, serve different, yet connected, purposes. The first, command and control, expands command responsibilities cited in Joint Publication 0-2.⁷ The second, C 4, represents the system and mechanisms used by the commander to exercise the command and control functions. Together C 2 and C 4 combine to form the links between how

⁷ In addition to the command responsibilities depicted in JP 3-17, Joint Publication 0-2 *Unified Action Armed Forces (UNAAF)*, February 1995, lists command responsibilities. The UNAAF is linked to JP 3-17 through the structure of the Joint Publications plan approved by CJCS. Therefore, command issues addressed in the UNAAF apply equally to joint airlift operations and all joint operations. Doctrine in the UNAAF amplifies command requirements in JP 3-17 by stating, "Command includes the authority and responsibility for effectively using available resources and for planning the employment of, organizing, directing, coordinating, and controlling military forces for the accomplishment of assigned missions."

commanders exercise their responsibilities, how an airlift operation are planned, and finally, how plans are transmitted, assessed, and controlled.

The essence of JP 3-17's guidance for C 2 and C 4 is the direct and unobstructed link between the airlift commander, the JFC, the airlift user, and units the commander controls. To ensure these links are accounted for in planning, JP 3-17 lists specific C 4 planning considerations necessary to achieve control over the components of the airlift operation and system. Listed here for clarification of the C 4 system and procedural requirements, these elements reflect several issues that surfaced during OUD and OJE.

- a) Communications-electronics during air movement
- b) Communications net for early operations
- c) Net between the departure and arrival airfield (or landing zone)
- d) . Transition from assault net operations to normal communications
- e) Communications from the objective area and communications from the joint force headquarters to and between component commands
- f) Formulation, publication, and distribution of the JCEOI
- g) Relay-type communications

Integrating these considerations into the C 2/C 4 plan should result in a systematic linkage between command channels and the points of execution during each phase of an airlift mission. Commanders pass mission orders, plan changes, and essential information upward and downward through these links and ensure unity of effort is achieved by all the components of the airlift system.

Terminal Requirements

Terminals are those points at either end of the airlift bridge where transfer of personnel and equipment occurs between the airlift user and the airlift provider. In essence, terminals support and accommodate all transfer actions between the

cargo, personnel, or equipment being moved and the aircraft moving them. Depending upon the size, scope, and nature of the airlift operations, terminal operations range from small operations at a single base to large enterprises requiring numerous departure and arrival terminals and wide arrays of terminal support operations and equipment. These support operations include essential enroute aircraft beddown, maintenance, and refueling. Together these operations provide a continuous flow of aircraft to meet the user's movement needs.

For airlift planners and operators, facilitating the smooth transition between user and provider is a goal of terminal operations. To achieve an orderly flow during terminal operations, airlift doctrine includes the features of air terminal operations most likely to produce success.⁸ Specifically, JP 3-17 states an air terminal, "is an area prepared for the accommodation (including any buildings, installations, and equipment), landing, and take-off of aircraft. Emphasis here is placed on the word "prepared" because airfields are usually pre-existing facilities with hard-surface runways, extensive ground operations areas (for taxiing, parking, cargo handling, and other appropriate uses), and support infrastructures required for sustained airlift operations."⁹

Determining how an air terminal or set of air terminals supports a given airlift operation is first a function of understanding mission objectives and then relating those objectives to terminal requirements. The first issues are what force the user requires, how much time is available to move the force, and where are the pick up and delivery locations? These questions help frame how the airlift operation will

⁸ JP 3-17. P. I-10.

unfold and what the terminal requirements will be. For instance, a parachute unit scheduled for an airborne operation requires different terminal support than an Air Force fighter squadron. Terminals supporting airborne operations require separate facilities for airdrop load preparation, parachute rigging, and personnel pre-jump activities. An Air Force unit, on the other hand, may require special terminal material handling equipment (MHE) to load fighter engines, or it may require no MHE if passengers are loaded. Therefore, knowing as much as possible about the mission requirements leads to understanding of the terminal requirements and promotes efficient and effective airlift operations.

Time is the second critical parameter for determining terminal requirements. The time available to “close” a force, i.e. deliver all of its personnel and materiel, will further define the kind and size of terminal(s) required for an airlift operation. These time elements also influence decisions about the type and numbers of aircraft required for the movement.

Another key parameter for planning terminal requirements is the “throughput” required to support an operation. Throughput is a statistical term for the flow of personnel and materiel moving through a given location in a given period. Often expressed as tons per day or passengers per day, the goal is to achieve to highest possible rate of throughput through a terminal.¹⁰ Increasing throughput equates to more equipment, cargo, or personnel delivered where they can be used by the theater commander. Therefore, airlift planners look for ways

⁹ JP 3-17. P. I-10-I-11.

¹⁰ “Throughput” designates the total tons of cargo or numbers of personnel that transits a terminal in a given period.

to improve throughput. For example, throughput was as essential consideration during the Berlin Airlift operation of 1948 and 1949. Because the Russians had blocked all surface transportation into Berlin, the Air Force elected to deliver food and coal to the city by an airlift operation. Brigadier General Joseph Smith and then Major General William Tunner, the airlift commanders, experimented with numerous concepts, ideas, and programs to increase the rate and tonnage of deliveries into Berlin. At the terminals in Berlin, each tried methods such as standardizing processes for loading and unloading aircraft, the use of trucks and forklifts instead of manhandling heavy industrial loads, the concept of meeting aircrews on the ramp with weather updates and flight information, and replacement of smaller C-47s with the larger, more capable C-54s.¹¹ All these initiatives produced more tonnage delivered per aircraft landing and added to the throughput of supplies delivered to Berlin.

A final issue for review concerning terminal requirements is specific to airdrop/airborne operations. In these operations, the terminal is no longer a base or airfield, but rather a zone where forces are delivered. JP 3-17 thoroughly examines the details of selecting zones for tactical operations and provides details of dropzone dimensions to assist joint airlift users in selection of appropriate zones of employment.

¹¹ Miller, Charles E. Lieutenant Colonel. USAF. *Airlift Doctrine*. Air University Press Maxwell AFB. March 1988. p.180.

Capabilities of Airlift Aircraft

Most often the thoughts associated with airlift operations are scenes of large, relatively slow, and fat aircraft filling the ramps and taxiways of air terminals. However, its these attributes (large, slow, and fat), that not only distinguish theater airlift aircraft from other air vehicles, but also provide the diversity and capability needed to achieve the theater airlift mission. Although large and slow compared to the fighters, theater airlift aircraft are highly capable, functionally designed aircraft. Their particular design shapes and high wings provides substantial capability to the theater air mobility mission. Basically, the aircraft's design allows it to operate in short airfields at high gross weights, two characteristics common to theater airlift operations.

Joint Publication 3-17 states "in theory, almost any aircraft could contribute to the theater airlift mission," yet the primary benefit and flexibility of the theater airlift system results from the speed, range, and easily modified cargo configurations of modern airlift aircraft.¹² Speed and range differences between air and surface transportation allow aircraft to move loads, from seven to one hundred tons, over and around surface obstacles at speeds from 250 to 500 knots. These advantages, along with the ability to reconfigure aircraft to meet a variety of load requirements, provides the JFC tremendous capability to deliver and reposition forces.

In large part, the diverse capability and flexibility in an airlift system rests on the capabilities and numbers of the types of aircraft in its fleet. No one type of

¹² JP 3-17. P. I-14.

aircraft is exclusively suited to all airlift roles; and in the U.S. military, the fleet is balanced with a mix of aircraft that perform operations over various distances and carry various load sizes and weights. Accordingly, as Air Mobility Command points out, “distinction between theater airlift and strategic airlift has little to do with the capability of the (cargo) aircraft employed. C-130s can be and are employed “strategically” across theater boundaries -- just as “T” tails (C-5s, C-141s, and C17s) are employed in the tactical role.”¹³ Also, JP 3-17 notes that, “rotary wing aircraft must be considered for the theater airlift role. Rotary wing aircraft, because of their flexibility, survivability, and versatility, are better suited for some support missions than their fixed wing theater airlift partners.”¹⁴ Today there is little doubt the U.S. military operates a diverse and massive theater airlift fleet capable of meeting many missions and roles in the theater environment.

A second bedrock of theater airlift flexibility derives in great part from the capacity of modern military air transports for quick reconfiguration. “Configuration” is the term used to explain how the cargo area of the aircraft is set up to receive loads. Obviously a tank could not park in an aircraft full of passenger seats. Nor would passengers normally sit on a barren floor beside pallets. Therefore, for each kind of load, personnel or equipment, the aircraft's configuration is changed.

However, the strength of dedicated theater airlift aircraft is not that configurations can be changed, but that they can be changed quickly. The ability

¹³ AMC White Paper. *A Review of Today's Airlift System*. White Paper not dated.

¹⁴ JP 3-17. p. I-16.

to reconfigure rapidly, in the heat of battle, allows a theater commander to adapt to unforeseen and changing conditions. For example, a C-130 configured to airdrop a 37,000-pound personnel carrier can be reconfigured to carry 92 passengers in less than two hours. Or a C-130 configured for a palletized airdrop load can be reconfigured to receive wheeled vehicles in less than one hour. Along with C-130s, C-141s, C-5s, and C-17s possess the same qualities for reconfiguring rapidly. Ultimately, this ability increases flexibility for the airlift planner and provides the user more options in developing operational concepts and strategies.

In summary, the United States owns and operates a large and diverse fleet of aircraft that are capable of conducting theater airlift operations. These aircraft significantly enhance the JFC's ability to conduct theater mobility operations. Considerations regarding capabilities of airlift aircraft are one more element of doctrine that must be considered in the planning phase of each operation. Again, the crux of decisions and choices over aircraft selection goes back to points previously mentioned in the planning process: mission objectives, size and scope of the airlift operation; and, finally, how much time is available to accomplish the mission. By understanding these, the right aircraft can be matched to mission.

Methods of Airlift Delivery

The final element of doctrine discussed in this review is "methods of airlift delivery." These methods round out the elements of and criteria for successful airlift operations and more importantly ensure airlift operations fill the JFC's

requirements. As with different aircraft types, different delivery methods also allow for multiple options when creating a theater airlift plan.

"There are two basic methods of airlift delivery: airland and aerial delivery, each offering a particular set of advantages and disadvantages to the airlift user and providers."¹⁵ These methods provide different options to the JFC for constructing the theater campaign plan. Additionally, because of the different capabilities of various aircraft, differing methods of aerial delivery greatly expand the window of opportunity for air delivery of many loads.

Within the two primary methods of theater airlift, the primary functions are further subdivided into airland, airdrop, and extraction.¹⁶ Cargo can be delivered by any of these three methods; however, personnel are only delivered by airland or airdrop. Airland is generally the best method of delivery. It provides accuracy with little damage to loads and allows the backhaul of cargo and personnel. However, the airland method requires a suitable runway for fixed-winged aircraft. For situations where runways are not available, airdrop is an option for certain load types. "Airdrop or combat aerial delivery operations may be required when forces or material cannot be landed due to lack of airfields, hostile threats, or other factors. Additionally, many of the Army's forced entry concepts rely heavily on airdrop and it remains an integral part of Army doctrine."¹⁷ Extraction is the least preferred method of delivery because only C-130s perform this

¹⁵ JP 3-17. p. I-10.

¹⁶ Although extraction remains listed in JP 3-17, a 1996 U.S. Army Memorandum to Headquarters AMC dropped its requirement for this method of delivery. The Air Force terminated its training and operational requirements to maintain LAPES qualified crews.

mission and zones for extraction are rarely available. Additionally, recent changes to US Army doctrine no longer require the Air Force to maintain extraction capability.¹⁸

Joint Publication 3-17 gives specific guidance to determine the method of airlift delivery and parameters that affect the decision of which method to use. The five parameters affecting decision-making include the following: 1) the nature of the theater airlift operation, 2) user requirements, 3) the capabilities of available airlift forces, 4) types of terminals available, and 5) the threat. Once operational objectives are determined, both airlift planners and users weigh each of these parameters to determine the most suitable delivery method for a given mission. In some instances, these choices are straightforward with little room for compromise. For example, if the JFC decides an area must be secured, yet a medium level of threat exists, then airdrop may be the method of choice. The goal in this case is to reduce aircraft and combat force exposure time in the hostile area. On the other hand, in an area where no threat exists and runways are plentiful, airland is usually preferred. For the user and airlift planner, the decision to use one method of delivery over another comes from a constant and recurring summation of all the factors that affect the entire airlift system and the overall goal of the JFC's campaign objectives.

¹⁷ Airlift/Tanker Quarterly *Airlift* Fall 1995 p.29.

¹⁸ Conversation with Lieutenant Colonel Johnny Broner, USAF Combat Aerial Delivery School, Joint Training Division. September 1997.

Summary

The previous section provided a review of the six doctrinal elements of Joint Publication 3-17 and established a baseline of elements for the review of the case studies. To further aid the understanding of doctrine, the airlift system, and operations, it is also necessary to understand the role of each of these elements in an airlift operation as it unfolds; and it necessary to appreciate that none of these six elements operates in isolation from the others. The brief discussion that follows is intended to provide such understanding and sets a chronological framework of how a contingency unfolds.¹⁹

Through any number of sources (a warning order from the National Command Authorities or an item on Cable News Network) a Commander In Chief (CINC) becomes aware of a situation in his area of operations (AOR) requiring a military response. The CINC designates a Joint Force Commander and allocates forces to the JFC and directs the JFC to assess the situation, develop courses of action (COAs), and begin detailed operational planning. In support of these COAs, the movement of a large number of ground troops and equipment may be required.

¹⁹ Although the terms warfighter and JFC have been used interchangeably in Chapter One, this does not imply that theater airlift operations are exclusively reserved for combat contingency actions. Yet, as was briefed by Brigadier General C.J. Wax at the 1995 Annual Airlift Tanker Association Convention, since DESERT STORM, Air Mobility Command and Air Combat Command participated in no less than fifteen major airlift operations and eight of these were either humanitarian relief or natural disaster response. However, for the airlift system the processes and procedures for operating in military operations other than war and humanitarian relief mirror many facets of contingency response.

Formulating a concept of operations for the employment of forces, the JFC creates a staff for detailed planning. In this process, one of the first decisions is how will forces be moved to points within the AOR? Doctrinally, the CINC or JFC moves as many forces as possible through the use of organic transportation assets assigned to the command. This includes theater airlift.

Normally the CINC or JFC designates a Joint Forces Air Component Commander (JFACC), who appoints a Joint Air Operations Center (JAOC) director. The JAOC director, working for the JFACC, takes direction and guidance from the JFC and JFACC to begin building the theater airlift plan. Along with this guidance, the JAOC director also opens lines of communications with airlift users. Using each of these sources of information, the JAOC director, through the Airlift Coordination Center (ALCC), determines exact requirements for load data, locations for pickup, locations for delivery, timelines for delivery, and method of delivery. All of this information forms the working data base that the JAOC director uses to create the theater airlift concept of operations and theater airlift support plan. Based upon the information in the concept of operations, ALCC planners move to lower levels of planning. These levels include the designation of terminal support requirements (i.e. material handling equipment (MHE), Tanker Airlift Control Elements (TALCEs), maximum on ground (MOG) servicing, and parking space for different varieties of aircraft).

Another critical aspect of the unfolding plan is determining how the airlift forces, both aircraft and support, will be commanded and controlled. JP 3-17 lays a line of command and control in general; however, depending on the different

airlift operations that may occur within an AOR, the C 4 lines may stretch far beyond generic boundaries. For instance, a large army airdrop operation may require the C 4 lines to go through senior Army leadership for mission-related decisions. This contrasts to airland operations, that normally require no Army coordination once the mission begins.

Two other provisions of JP 3-17 require discussion prior to moving to the case studies. These provisions relate to establishing a Director of Mobility Forces (DIRMOBFOR) and to force augmentation. These two specific points in JP 3-17 are essential components of developing an theater airlift operation. Theater airlift operations vary greatly in size and scope and therefore require different levels of leadership to make critical decisions. If an airlift operation is large or complex, the JFACC normally designates a DIRMOBFOR to assist in leadership decisions. The DIRMOBFOR is an expert on air mobility issues. The DIRMOBFOR's expertise is a valuable resource for the JFC and JFACC.

Accordingly, one decision that must be made or at least considered, is augmentation. Augmentation occurs when the theater simply does not have either the personnel, equipment, or aircraft to conduct the mission with organic resources. During theater airlift augmentation, several issues come in to play. First, what airlift assets are required? On the other hand, augmentation may require not only more aircraft (or personnel) but also different kinds of resources to meet specific theater unique needs. As an example, if Air Mobility Command were to augment USSOUTHCOM for operations into short, unprepared airfields in South America, it makes no sense to augment with C-141s. The logical case in

this example would be either C-130s or C-17s. Therefore, during augmentation, the experience and knowledge of the DIRMOBFOR greatly enhances the JFC's ability to conduct the theater airlift mission. In addition to the previously discussed elements of theater airlift doctrine, the expertise of the DIRMOBFOR and the added capacity of an augmentation force, all combine to form a complete package to meet the JFC's theater airlift needs. In conclusion, all the elements and components noted above form the foundation of standing theater airlift doctrine. Together, these parts ideally combine to meet the demands of uncertainty in intratheater airlift operations. Theater airlift, grounded in the diverse capabilities of its aircraft and nourished by a support system of planners, C 4 systems, and infrastructure support, stands ready to meet the needs of the user and the objectives of the JFC. The next two chapters will assess the validity of this ideal.

Chapter Two

Operation UPHOLD, DEMOCRACY

For numerous reasons, Operation UPHOLD DEMOCRACY (OUD) provides an excellent case for testing the adequacy of current theater airlift doctrine. From the outset, the planning phase was marked with numerous concepts of operations that included multiple methods of delivery supporting multiple commands. Additionally, OUD planning resulted in a situation where the command and control structures of airlift operated concurrently and separately for strategic and theater elements of the operation. Finally, because the operation was conducted in close proximity to the United States, the operation of these parallel chains of command and control persisted throughout its execution, with confusing impact on its conduct.

Operation UPHOLD DEMOCRACY, conducted in United States Atlantic Command's area of responsibility, demonstrated the US military's capability and flexibility to plan for and adapt to rapidly changing situations. Planning for OUD illustrated the value of joint planning. Military forces were tailored and packaged for the mission, provided the training and equipment to accomplish that mission, and integrated into a joint force. The availability of the two joint task forces for use in the theater of operations was not without cost. The flexibility to employ two different forces places a global constraint on US military forces as it precludes the use of these forces for major regional contingency.

Likewise, preserving options for force employment throughout the execution of the operation is force intensive.²⁰

Commander In Chief
United States Atlantic Command

Background

In September of 1994 the United States intervened in the internal politics of Haiti to restore democracy and stability to the strife-torn area. This operation, designated UPHOLD DEMOCRACY, involved the rapid airlift and sealift deployment and subsequent support of U.S. military forces from bases in the United States to Haiti. The basic concept for the deployments hinged upon a complex series of airdrop and airland operations. As it turned out, these operations were successful, but not without flaws in both planning and execution.

Planning Phase

Although Operation UPHOLD DEMOCRACY was a relatively small operation, its unique nature and multiple facets of operations presented complex planning and doctrinal challenges to both the Air Force and the Army. Perhaps the most significant source of complexity stemmed from the fact that the National Command Authorities (NCA) foresaw several possible options for military operations in Haiti. To pursue these options, the NCA established separate Joint Task Forces (JTFs), JTF-180 and -190. Both JTF-180 and JTF-190 were organized under the XVIII Airborne Corps (XVIII ABC). Air Combat Command

²⁰ Pamphlet developed by OC, Incorporated for Commander in Chief, USACOM. *OPERATION UPHOLD DEMOCRACY. US Forces In Haiti.* May 1997. p. iv.

(ACC) designated 12th Air Force (12 AF) as the air component to both JTFs for airlift planning and execution.

The first plan, OPLAN 2370-95, was the responsibility of JTF-180. It focused on using a massive airborne assault to secure the air terminal at Port-Au-Prince International Airport, Haiti. In accordance with standing airborne concepts, the airborne force would drop in; seize dropzones; secure airheads; and then, within seventy-two hours, begin to receive follow on support and assistance from other forces. After the replacement task force arrived, JTF-180 was scheduled to fly via USAF aircraft back to Fort Bragg, North Carolina.

The second plan, OPLAN 2380-95, was the responsibility of JTF-190. OPLAN 2380-95's deployment plan focused on using a short-duration, high sortie rate airlift flow to airland forces at airfields secured by JTF-180 forces. These operations would commence approximately seventy-two hours after the first task force arrived and would remain in place until the mission was complete. During the period of sustainment operations, the Air Force was scheduled to provide resupply and sustainment airlift operations to the task force. For both task forces, Air Combat Command designated 12th AF as the Air Component to plan the air operations including the airlift operations and numerous support missions. Air Combat Command selected Major General James Record, the 12 AF/CV, as the Joint Forces Air Component Commander (JFACC) for the operation; and he immediately began formulating air plans to include the airlift operations. However, because the airlift planning cell was newly formed and not fully staffed, 12 AF went into UPHOLD DEMOCRACY with insufficient manning to

accomplish all the planning and execution tasks. To mitigate the staffing problems, General Record requested assistance from Air Mobility Command. For airlift operations, AMC chose Brigadier George Gray from McGuire AFB as the Director of Mobility Forces (DIRMOBFOR).

General Gray was a proven performer in theater and strategic airlift operations and was a natural choice to head airlift operations. He had recently commanded the airlift operations in Somalia and had also worked on numerous occasions with the XVIII Airborne Corps, the headquarters of both JTF-180 and JTF-190.

General Gray formed his planning cells primarily from AMC units, specifically Air Mobility Command's Air Mobility Operations Group (AMOG) and C-141 units at McGuire AFB. Air Combat Command, as the C-130 force provider, had officers from ACC/DOL assisting with aircraft tasking and liaison duties, but they exercised no control of the operation.²¹ ACC's only C-130 planning representation from the squadron and group levels consisted of one lieutenant colonel each from the 7th Wing (7 WG) and the 314th Airlift Wing (314 AW). These arrangements brought limited expertise and representation from the C-130s units to the planning efforts.

When JTF 180 and 12 AF's AOC were activated, deliberate planning proceeded under a cloak of secrecy. General Record's after action reports noted that until just prior to D-day, the operation was designated as Top Secret Special Category (SPECAT). The SPECAT designation restricted information from

²¹ Steen, Robert. Major. USAF. Interview. 5 March 1998.

planners at lower levels and thus impeded subordinate units access to operational and tactical details. Despite this limitation, General Gray and his staff began developing an airlift concept to support OPLAN 2370-95.

In accordance with the doctrinal elements of JP 3-17, early planning and preparation for the airborne assault operation hinged upon the user's requirements supporting the Joint Force Commander's mission objectives. The JFC's concept planned for airborne operations to support JTF-180. Designation of the method of delivery and type of operation set the framework for a systematic review of what lay ahead for airlift operations.

JTF-180 and USAF planners determined a large airborne task force best suited mission objectives. The Army created its airborne force from the 82nd Airborne Division, while Twelfth Air Force established a large airlift task force from units provided by AMC and ACC, with C-141s and C-130s providing the bulk of cargo and troop carrying capability. The JTF Commander, Lieutenant General Hugh Shelton, also determined JTF-180 aircraft would launch from the air terminal at Pope AFB. However, because ramp space at Pope AFB supports only a limited number of aircraft, most of the heavy equipment aircraft were pre-loaded at Pope AFB and moved to Homestead AFB and MacDill AFB, Florida to await the launch order.

After General Shelton set the force composition, terminal, and delivery mode parameters of the operation, airlift planners began creating the details of the airdrop operation.²² The two primary planning tasks were integrating the aircraft

²² Steen, Robert. Major. USAF. Interview. 5 March 1998.

and crews into an airflow to meet mission requirements and creating a command, control, communications, and computer (C 4) structure to direct and manage all aspects of the operation from loading through aircraft recovery.

Twelfth Air Force's Air Operations Center was doctrinally responsible for all theater airlift C 4 preparations, planning, and operations within its area of responsibility (AOR). However, the NAF's newly formed staff operated in a doctrinal void of how to conduct aerial delivery operations from the CONUS into its AOR. Doctrinally, lines of command and control flowed from the JFC to the JFACC. The JFACC, in turn, normally would then pass direction and guidance to the Joint AOC (JAOC) director who would relay planning guidance to the Airlift Coordination Cell (ALCC). Finally, the ALCC would relay command and control information to Wing Operations Centers (WOCs). At the WOCs, aircrews receive the guidance and direction to complete individual airlift tasks, all supporting the initial intent of the JFC. These actions, represent a continuous and self-contained set of commands and actions for the JFC within a single AOR

However, UPHOLD DEMOCRACY presented a unique set of circumstances that crossed the boundaries of doctrinal C 4 planning and execution.²³ Because of the proximity of the Continental United States (CONUS) to the OUD AOR, 12 AF planned to use AMC's Tanker Airlift Control Center (TACC) to fulfill parts of the aircraft control duties after JTF-190 commenced operations. This change to established C 2 lines was questioned by officers in Air Combat Command's liaison team. Specifically, Lieutenant Colonel Jeffrey Northgraves, the senior

ACC airlift representative in the AOC during planning, expressed concern that the non-standard lines of command and control, especially if they were not clarified in the Operations Order (OPORD), would result in confusion at least and missed commands or orders at worst.²⁴ However, the order to execute came before all the lines of control were firmly established; and at the ALCC, WOC, and Tanker Airlift Control Element (TALCE) levels, there was unclear guidance on C 4 procedures.²⁵

The second part of the OUD concept of operation was OPLAN 2380-95. OPLAN 2380-95 was the JFC's follow-on airland operation into Haiti delivering a second task force. For OPLAN 2380-95, the JFC's intent was simple. When the air terminals at Port-Au-Prince and Cap Haitien were secured by the airborne operation, JTF-190 would move in by ship-borne helicopters and USAF airlift aircraft.

Although OPLAN 2380-95 was the secondary plan, it presented planning and transition challenges worthy of detailed attention. Of the issues that should have been addressed were the "what ifs." What if OPLAN 2370-95 aborted after takeoff and the NCA directed an immediate shift to OPLAN 2380-95? What if the aircraft flying in OPLAN 2370-95 were delayed and otherwise able to get to the pickup locations for JTF-190? What if the NCA was unsure about the need

²³ Steen, Robert. Major. USAF. HQ ACC/DOL. Interview. 5 March 1998.

²⁴ Northgraves, Jeffrey. Lieutenant Colonel. USAF. Air Combat Command Airlift Operations After Action Briefing

²⁵ Northgraves, Jeffrey. Lieutenant Colonel. USAF. Air Combat Command Airlift Operations After Action Briefing

for JTF-180 and directed JTF-190 to proceed yet kept JTF-180 "on the hook" in case hostilities required additional forces? Interestingly, these "what ifs" occurred and caught planners by surprise.

Execution

On the evening of 17 September 1994, the aircraft and crews were in place at their departure points and standing by for the order to begin.²⁶ At Homestead AFB and MacDill AFB, the task force's heavy equipment airdrop loads sat prepositioned on C-130s and C-141s. At Pope AFB, thirty-six C-130s sat preflighted and ready for loads of airborne troops. Upon receipt of the execution order, the C-130s at Pope AFB would be loaded and depart to join the aircraft from Homestead AFB and MacDill AFB. The Joint Task Force headquarters received the execution order on the morning of 18 September. This set in motion the execution of OPLAN 2370-95.

From the outset, problems plagued the C-130 formation at Pope AFB. Most of these problems occurred because of miscalculations during planning. However, some resulted from the planning process itself being held at such a high level of secrecy that detailed tactical planning by the individual flying units did not occur until late in the execution cycle.

The first problem of consequence occurred because of unexpectedly long delays during takeoff. As planned, each aircraft would use a thirty-second takeoff interval behind the previous aircraft. However, the first few takeoffs revealed the

²⁶ USACOM After Action Report for Operation UPHOLD DEMOCRACY

aircraft were not performing as planned. The aircraft were taking much longer to position themselves on the runway and make their takeoff. Additionally, once airborne, the aircraft barely cleared trees at the end of the runway. Realizing the implications of those events for the safety of subsequent aircraft, the airborne mission commander directed the aircraft commanders to change takeoff procedures and use the underrun area on the runway. This area provided an additional takeoff area and increased aircraft takeoff performance and safety margins.²⁷ However, this unforeseen maneuver was costly, adding an average of one minute to each aircraft's takeoff time, thereby subtracting thirty minutes from the airdrop timeline.

The other significant problem with the first stage of the operation occurred while the aircraft were reassembling for their approach to Haiti. It stemmed from unclear guidance in C 4 planning. While aircraft were reassembling and proceeding to the objective area, the NCA issued an order to abort the mission.²⁸ The Airborne Mission Commander received this order via satcom radios. However, the order did not come through the JTF, but through the United States Transportation Command (USTRANSCOM), a change to normal theater C 2 procedures.

Although the formation received the abort order in time to turn around safely, concern over the manner of the order's receipt resonated at both AMC and ACC headquarters. AMC and ACC's major concern focused on two issues: non-

²⁷ Hunter, Carl. Major. USAF. 12 AF AOC ALCC during Operation UPHOLD DEMOCRACY

standard procedures and the delay between when the order was initially transmitted by the NCA and the time it was received by the aircraft. ACC was particularly concerned with the question of "what would have happened had the formations been closer to the dropzone"?²⁹ Also, AMC's after action report reflected serious concern over this issue and suggested that a change to doctrine and C 4 procedures was warranted.

Other concerns arose after the airborne assault was aborted and the JFC directed implementation of OPLAN 2380-95. First, because the NCA would not allow the JTF-180 commander to download the airlift aircraft, for fear they might be needed immediately, how did 12 AF plan on moving JTF-190?³⁰ 12 AF did not have a plan that covered this option. Simply put, 12 AF only had access to 132 airlift aircraft. Any change to the plan was going to be at the expense of another plan. However, 12 AF did not have any preplanned contingency response prepared.

The second problem resulted from the user having to change between the two OPLANs, effectively leaving XVIII ABC operating under a third option, the mixing of OPLAN 2370-95 and 2380-95. At one point during the transition, no less than seven approved Time Phased Force Deployment Data (TPFDD)

²⁸ USACOM After Action Report for Operation UPHOLD DEMOCRACY

²⁹ Steen, Robert. Major. USAF. HQ ACC/DOL. Interview April 1998.

³⁰ USACOM After Action Report refers to direction by the NCA. However, it does not specifically name any members of the NCA.

documents were flowing through the AOC.³¹ Each of these, in some fashion passed back and forth between JTF-180, JTF-190, and 12 AF numerous times. This confusion overwhelmed the ALCC's ability to respond to the user's requirements.

The third problem was clearly a command and control issue. In planning the operation, 12 AF anticipated it would turn over C 4 duties to the AMC TACC when JTF-180's deployment was complete. However, the details of this transition were never worked out between the two headquarters. Consequently, the TACC took control of operations while C-130 and ACC support units believed they were still under the control of 12 AF and the AOC. The results of this arrangement left C-130 units without contact with command elements; and frequently the C-130 units ignored the TACC's orders. Additionally, believing the AOC was in charge, the TALCE at Cap Haitien Airfield in Haiti lost contact with higher headquarters and ran short of supplies and rations.³² All these actions pointed to a breakdown in C 2 and C 4 when parallel lines of command operate in the same AOR.

³¹ USACOM After Action Report prepared by IOC Corporation for Joint Chiefs of Staff. Copy on tape and C.D. at USACOM and USTRANSCOM historian offices.

³² The 314th Airlift Wing after action reports and analysis noted conclusions from the flying squadron commanders, the Operations Support Squadron commander, and the Tanker Airlift Control Squadron commander. Repeatedly the theme of their reports reflected the command and control issue as a primary concern at the squadron level. In this report the text states, C-130 units ignored orders from the TACC. Actually, at one point the TACC, AME, the AME Forward, and AOC ALCC were sending orders simultaneously. These orders, which were not coordinated among the headquarters units, obviously caused confusion among the units receiving numerous levels of direction. Lieutenant Colonel,

In summary, many of the transition problems and even many of the early C-130 problems, stemmed from improper planning and oversight at several levels of planning. From the outset, OPLAN 2370-95 drew the attention of the airlifters working behind SPECAT doors. This plan was to be complex – an airborne assault with medium threat potential and the congregation of 296 aircraft over Haiti during the darkness of D-day. This complexity demanded thorough and exhaustive planning. Only through arduous attention to detail would a forced entry airdrop work right. However, the difficulty of the airdrop operation did not divorce the need to go through deliberate steps to ensure JTF-190 would smoothly transition from JTF-180.

One final aspect of planning surfaced, reflecting problems with the theater airlift forces and responsibilities from Air Mobility Command (AMC) to Air Combat Command (ACC). AMC planners, working under the AMC DIRMOBFOR, were C-141 pilots and navigators. Overall, they constructed a superb concept of operations at the operational level. However, at the tactical level they created the airdrop plan in accordance with C-141 procedures. This led to numerous oversights in performance data calculations and flight planning for the C-130 operations. Furthermore, in accordance with SPECAT procedures, the C-130 operators did not receive a detailed review of the plans until they arrived at their staging bases on D-4. By this time, the JTF-180 execution sequence was already in motion, leaving little time for the operators to review charts, routes, fuel plans, abort procedures, weather avoidance plans, and recovery plans. As

314 OSS/CC, stated that in the situations he just tried to do what

noted earlier, these oversights caused problems for the C-130s as early as the initial takeoff from Pope AFB and followed the operation through all phases of execution.

Analysis

Although the support provided to Operation UPHOLD DEMOCRACY by airlift operations was successful in most areas, especially after the obstacles of the OPLAN transition was worked out, many areas surfaced that pointed to problems in doctrine, execution, or both. In this brief summary, the major doctrinal issues of OUD will be restated and provide a baseline for the doctrinal implications that follow in chapter four.

From the beginning, one of the major problems with the theater airlift plan during OUD was its "close-hold" nature. The designation of SPECAT threw the responsibility to plan a very complex operation into the hands of a few planners and commanders. These planners accomplished the details at the operational level, but at times forfeited some of the accuracy of details at lower levels. Additionally, by compartmentalizing plans, the various flying agencies and supporting functions (i.e. TALCEs and C 4 support agencies) were unable to view all aspects of the operation to ensure each phase flowed logically and was supportable. Finally, the magnitude of the operation caused the primary planners to focus on the primary OPLAN, and little consideration was given to the secondary OPLAN or transitional plans. Each of these issues combined to interject confusion and obstacles into the execution phase of the operation.

seemed most logical.

The second category of problems stemmed from the existence and employment of parallel chains of command before and during the operation. Although this issue only surfaced briefly, it added to the confusion of transitioning between the two OPLANs. For ACC and the C-130 units, this was especially worrisome because the C-130s ended up working for AMC's Tanker Airlift Control Center (TACC). This was a shift in doctrine to have the TACC control forces that should have been under the control of the AOC. This point clearly demonstrated the doctrine for theater airlift C4, particularly when operating in areas of parallel chains of command and lines of control, is not adequate.

Also in the same area of JP 3-17, there are no doctrinal suggestions or lessons of how to plan for transitions from one operation to another. Although all operations are clouded by the reality of unforeseen conditions, JP 3-17 could include lessons or at least suggestions about conducting simultaneous or overlapping operations. The major points of transition, at least from OUD, are that the user will be operating in a period of confusion and uncertainty and that the airlift C 2 and C 4 organizations will experience similar problems. Therefore, any time there is more than one OPLAN or concept, doctrine should include a section on planning for transitions or changes to existing plans.

The final issue that failed the planning test in OUD was terminal requirements or, in this case, understanding how terminal requirements affected airlift operations during heavy weight combat conditions. JP 3-17 mentions that terminal requirements should be considered. However, as with most of JP 3-17,

the doctrine is a prescription of "what" needs to be done, but there is no mention of "how" planning should be accomplished. Nor are there specific planning conditions and considerations for the forces and aircraft involved.

Interestingly, however, one positive lesson came from OUD regarding terminal use. This lesson reflects the consideration of and planning for the terminals at Homestead AFB and MacDill AFB. For both of these bases, the missions planners saw an opportunity to move forces away from the primary terminal at Pope AFB, thus freeing terminal space for the personnel airdrop operation. This wise use of transit bases, in light of the takeoff delays incurred by the C-130s, created options that allowed the airborne force to proceed in spite of problems on takeoff. Although this point on terminals does not change standing doctrine, it strengthens the case for adding additional details to the body of JP 3-17.

In summary, Operation UPHOLD DEMOCRACY provided many lessons to add to the experience base that forms doctrine. Operation UPHOLD DEMOCRACY demonstrated that theater airlift operations today are very complex and often cross the boundaries between strategic and theater operations. Additionally, because of the NCA's decision to maintain the option of reacting to any number of possible situations, the numerous and overlapping plans added to the confusion and problems of an already complex process. These types of overarching issues will continue in the future to drive theater airlift commanders, planners, and operators to plan for, but more importantly, to be able to adapt to

changing situations. Therefore, the doctrine and guidance in JP 3-17 must support and help clarify these situations and tasks.

Chapter Three

Operation, JOINT ENDEAVOR

Operation JOINT ENDEAVOR provides a second useful example of the relationship between standing doctrine and current practice. Although Operation JOINT ENDEAVOR is similar to Operation UPHOLD DEMOCRACY, it also presents unique circumstances where aircraft normally employed on long-range, intertheater missions, i.e. the C-17, C-5, and C-141, participated in a long-term deployment supporting a theater mission. Operation JOINT ENDEAVOR presents the opportunity to continue this study focusing on the integration of strategic assets into theater operations. In this light, this chapter studies one aspect of the doctrine in Joint Publication 3-17, the "Augmentation of Theater Forces." Specifically, the operation demonstrates that augmentation of forces brings unique challenges to effective theater operations. Therefore, this study of JOINT ENDEAVOR focuses on the problems, lessons, and implications of large scale theater augmentation by strategic forces.

Background

In December 1995, as part of ongoing U.N. and NATO peacekeeping operations in the Balkans, the United States moved its contingent of the newly-formed International Force (IFOR) into Bosnia. These efforts began on 14

December 1995 and ended on 20 December 1996, and were called Operation JOINT ENDEAVOR (OJE). Developed quickly after the Dayton Peace Accords were signed in November 1995, OJE began with minimal long-term planning on the part of U.S. European Command (EUCOM). To get the operation under way, EUCOM initially elected to rely upon United States Air Forces Europe (USAFE) C-130s to meet all intratheater airlift requirements, mainly the deployment of personnel and materiel from northern Europe to Bosnia.³³ However, dismal weather and political events soon changed EUCOM's concept of operations to include a sustained augmentation of the C-130 effort by long-range aircraft and support units of Air Mobility Command (AMC).

Planning Phase

Initial theater planning for Operation JOINT ENDEAVOR began in USAFE's Air Operations Center (AOC) Airlift Coordination Cell (ALCC) in Vicenza, Italy. Early in the planning process, changing events and deteriorating weather led USAFE planners at Vicenza to believe they could not meet the movement requirements of the U.S. Army Europe (USAREUR), the main "user" in the deployment to Bosnia. USAFE requested augmentation, and the Air Force responded by sending additional personnel and aircraft to the theater. In addition to sending personnel from AMC's Tanker Airlift Control Center (TACC) to the AOC, AMC also dispatched Brigadier General Buck Marr and a small staff to Rhein-Main AB to plan and control the "strategic" aircraft about to begin working

³³ Begert. Major General. United States Transportation Command. Letter from USTRANSCOM J-3 . 29 Mar 1996.

in the "theater" role.³⁴ With the AMC and AOC planning and control staffs both in place, theater airlift planning efforts continued.

The army set the stage for planning by establishing their airlift requirements. Initially, a large force, including outsized and heavy bridging pieces, had to be moved from Germany to Bosnia. As mentioned in chapter one, the army should have specified exact requirements for force pickup and delivery and the critical times for delivery. However, from the operation's beginning, the Army failed to provide a useable and reliable list of requirements to USAFE.³⁵

The Air Force, unsure of exact Army needs, responded to USAFE requests by planning for additional aircraft to augment

³⁴ Marr, Buck. Brigadier General. USAF. AMCW. JULLS Report 22749-307 (01817). In reading the JULLS reports on the AMC integration into the theater role, there was no reference to the orders that changed operational control (OPCON) ("chopped" is a slang term often used to denote 'change of OPCON') aircraft and personnel to the theater. Neither did General Marr's narrative in JULLS clearly establish whether the AMC were technically "chopped" to the theater or if there were other arrangements for theater augmentation. Often, if an aircraft is on a single sortie augmentation mission it will not chop, rather it is tactically controlled (TACON) for the duration of the sortie. After the sortie is complete its control reverts to its previous C 2 agency. However, the difference between OPCON and TACON are significant for long duration operations because change of OPCON thrusts upon the gaining agency requirements to provide additional support, oversight, servicing, and control of the forces that chop. Later in reading other JULLS reports there is evidence that the AMC forces actually chopped, thereby putting all responsibility on the theater commander for supplying and supporting the chopped forces. This being the case, General Marr should have been working for or at least coordinating with the AOC at Vincenza. However the service, MAJCOM, and JULLS after action reports never clarify the relationship of all the AMC forces in theater. It is quite possible that some were chopped and some were not thus further adding to confusion over C 2, C 4, and support issues.

³⁵ JULLS Report 61502-8400 (00184)

USAFE.³⁶ Primarily this augmentation force consisted of additional C-130s from ACC and 2 C-5s, 12 C-17s, and 10 C-141s from AMC.³⁷ The basic concept called for providing enough aircraft to run operations 24-hours a day and different sizes of aircraft to meet any of the army's needs.

To meet the USAEUR requirements, USAFE and Army planners had to make some critical decisions about terminal requirements. The Army had personnel and forces available to move to Rhein-Main AB and Ramstein AB terminals in Germany as the primary locations for pickup. Using these locations appeared appropriate, because the augmenting aircraft were already scheduled to deploy to Rhein-Main AB and USAFE C-130s were based at Ramstein AB. Hence, loading at each aircraft's home base provided a logical point for the concurrent servicing and loading of aircraft.

The next issues for USAFE planners revolved around how to command and control the large airlift force that was building in Europe and how to integrate different C 4 systems. USAFE, like any theater, had theater-unique C 4 procedures and systems for C-130 operations. In Europe, theater airlift operations usually are planned and transmitted via a system known as CTAPS (Contingency Theater Automated Planning System). However, with the influx of AMC aircraft, that command's Command and Control Integrated Planning System (C2IPS)

³⁶ McClam. Colonel. USAF. 437 OG. 11050-43418 (001017)

³⁷ Machovina, Gary J. Colonel. USAF. Deputy Director Operation Joint Endeavor Regional Air Movement Coordination Center (RMAACC). After Action Review. On file, HQ AMC Historian's Office. Not Dated.

system also became an element of theater planning and control. As one would expect, C2IPS was not fully compatible or easily integrated with CTAPS.³⁸

Unlike Operation UPHOLD DEMOCRACY, when it came time to execute Operation JOINT ENDEAVOR, there was no detailed OPLAN per se. Instead, there was a growing force of airlift assets in place at Ramstein AB and Rhein-Main AB ready to respond to taskings coming from the ALCC and AMC's Air Mobility Element (AME).³⁹ And, instead of a start-to-finish unified effort between the Army and USAFE, what lay ahead was an execution phase responding to *ad hoc* Army requirements and forecasts. This led, in turn, to *ad hoc* airlift procedures, daily scheduling, and C 4 procedures. Or, as summed up by one Joint Uniform Lessons Learned (JULLS) report, "the whole problem was the indefinite nature of the tasking and responses to guesses and rumors instead of a measured, orderly, and logical response to realistic requirements."⁴⁰ From this point, Operation JOINT ENDEAVOR moved into its execution phase.

³⁸ Peck, Ronald E. Colonel. USAF. AMC Chief of Readiness. Interview 19 Jan 1998.

³⁹ Doctrinally the AME is an extension of the TACC for forward area coordination specifically of strategic operations. The AME does not exercise TACON or OPCON of theater assets, whether they are OPCON or TACON to the theater. However, the AME in OJE performed many functions outside of their normal procedures. Through an interview with Major Jeff Fetner, who was assigned to the AME at Vincenza, he stated not only did he provide support to the strategic aircraft working in the theater role but more often he worked C-130 theater planning issues.

⁴⁰ JULLS Report 11050-43418. McClam. Lieutenant Colonel. USAF. 437 OG

Execution Phase

From its outset, Operation JOINT ENDEAVOR promised to be a complex operation, requiring both users and airlift planners to work under the pressure of unusually tight time constraints and unclear objectives. These problems were exacerbated by organizational issues that crossed the boundaries of service, command, joint, and coalition operations. With these events as a backdrop, the operational deployment began with an incomplete planning foundation of stated requirements, inaccurately estimated capabilities, and inadequately established procedures to deal with the inevitable changes brought on by weather and inadequate planning. Responding to this situation, theater airlift operations began with insufficient assets to accomplish the mission and inadequate planning and control structures to meet perceived needs.

As soon as JOINT ENDEAVOR began, it had both strategic and intratheater phases that overlapped in terms of terminal usage, aircraft operations, and roles. Terminal overlaps, particularly at Rhein-Main AB, became a particularly vexing problem. Rhein-Main Air Base, Germany, which had recently been “downsized” as part of the policy to reduce the enroute structure, was built up to be the hub for intratheater airlift and serve as a staging base. Ramstein Air Base, Germany played a secondary role as a hub terminal. From Germany, intratheater missions airlifted loads principally to Taszar, Hungary and Tuzla, Bosnia, with over 90 percent of the air deliveries in the Bosnia area of operations going to these two locations. Initially, the flow of aircraft was driven by a schedule of forty-eight missions per day out of Rhein-Main AB, rather than driven by requirements. This

approach was a response to uncertainty about user requirements because an accurate Time Phased Force Deployment Document (TPFDD) did not exist.⁴¹

Also during the early phases of the operation, numerous problems prevented airlift operations from achieving a high level of efficiency. One was the need for additional enroute terminal support. The rapidly escalating demands on Rhein-Main AB and Ramstein AB were overwhelming the terminals' ability to support the aircraft loading and servicing requirements.⁴² Accordingly, United States Transportation Command (USTRANSCOM) quickly re-established some of its enroute infrastructure. However, "difficulties in returning Rhein-Main to operational status were greater than anticipated and delayed strategic and theater airlift support."⁴³

The final doctrinal issue stemming from OJE was the integration of command, control, communications, and computers into one effective structure to control all theater airlift systems, units, organizations, and activities. Doctrinally, the ALCC is responsible for all aspects of C4. This includes not only the hardware and electronic links from the ALCC to all subordinate units and aircraft, but it also includes procedures for dissemination of plans, control of activities,

⁴¹ AMC White Paper

⁴² Primarily, Rhein Main AB as a beddown location, did not provide adequate physical resources because it was being used to meet numerous terminal requirements. First, Rhein Main AB was used to support throughput and deployment-generated cargo for transportation on AMC aircraft. Also, it was being used to upload Army loads destined for Bosnia. And, finally, it was a beddown base. Together these requirements over tasked the base's servicing capacity.

and reporting. Therefore, when AMC aircraft arrived in-theater and began flying USAFE missions, the ALCC should have provided the C 4.

From the outset the ALCC, working for JFACC, planned, scheduled, and controlled intratheater aircraft flying from Ramstein and Rhein-Main. However, as the situation expanded and strategic aircraft became a second leg of the intratheater air bridge, the scope of the ALCC's duties expanded, eclipsing their capability to control forces. "Because of its size and expertise, the theater airlift staff was not able to absorb and control additional forces. As a result, C-130, C-141, C-5, and C-17 operations were never fully integrated."⁴⁴ And, to confuse operations further, the AMC Air Mobility Element (AME) and other in-theater AMC organizations exercised control over AMC aircraft and at some points, even C-130 operations.⁴⁵

Numerous events illustrate the confusion resulting from the absence of doctrinal guidance for blending theater and long-range assets. As AMC report described one manifestation of the problem,

At one point dual validation, prioritization, and processing systems in the theater resulted in a continued lack of in-transit visibility (ITV) and a "two track" system – one for the C-130s and another for AMC aircraft – emerged. At Ramstein, for example, there were two separate cargo processing/marshaling areas – one to handle theater movements, the other to handle theater

⁴³ *Operation JOINT ENDEAVOR Deployment Lessons Learned*. United States Transportation Command. Developed by the JTCC for USTRANSCOM TCJ3/J4 21 Mar 96. P. 5.

⁴⁴ USTRANSCOM Operation JOINT ENDEAVOR After Action Briefing

⁴⁵ Fetner, Jeff. Major. USAF. AMC/TACC. Interview 19 January 1998. Major Fetner, as a member of AMC's TACC, deployed in December 1995, to augment the AMC AME.

movements being flown by “strategic” assets. Particularly during the beginning of the operation, this dual track confused customers and led to significant inefficiencies in planning, scheduling, and execution of all airlift.⁴⁶

As the AMC report went on to say, "At one point USAFE, through USEUCOM, requested that JCS provide additional C-130 augmenting forces. JCS tasked USTRANSCOM, which then tasked USACOM, which tasked ACC to provide the forces. Given this cumbersome arrangement it should not have been surprising that in the closing days of the implementation phase, eight of fourteen CONUS-based C-130s redeployed from Ramstein without prior knowledge or approval of the supporting (USTRANSCOM) command. Airlift assets previously scheduled for other missions had to be diverted and re-scheduled to compensate for the unplanned loss in capacity."⁴⁷ Consequently, confusion and inefficiency beset all early airlift operations.

Eventually, the airlift operations in Operation JOINT ENDEAVOR matured and fulfilled the JFC’s airlift requirement. Together, the USAFE ALCC and AMC’s AME developed the procedures and organizations to operate the theater airlift mission. However, the maturation of the airlift effort took time and early problems integrating operations slowed the pace of execution. Several of these problems stem either from organizational shortfalls or doctrinal shortfalls or both. In the next chapter these problems will be presented to reflect areas where

⁴⁶ AMC White Paper. *A Review of Today’s Airlift System*. White Paper not dated.

⁴⁷ AMC White Paper. *A Review of Today’s Airlift System*. White Paper not dated.

doctrine may be changed to incorporate the lessons of Operation JOINT ENDEAVOR.

Analysis

Although the airlift portion of Operation JOINT ENDEAVOR generally was successful, many problems surfaced that were doctrinal and/or operational in origin. This section will describe the key doctrinal shortfalls revealed during OJE in order to provide a baseline for exploring their doctrinal implications for JP 3-17 in the next chapter.

From its outset, Operation JOINT ENDEAVOR pointed to the problems theater airlift incurs due to poor or incomplete information from the user. The Army, which set the framework for the unfolding operation, should have provided the essential elements that drive all subsequent assessments, preparations, and planning. However, in OJE the Army was never able to provide accurate information to the theater airlift providers. This hindered planning for theater airlift operations and resulted in numerous problems when AMC decided to commit strategic aircraft to the theater role.

Two issues surfaced that indicate why the user was unable to provide adequate information to the theater airlift providers. The first was time; the second was a lack of mechanism to transmit information back and forth between the user and airlift provider. Regarding time, OJE was planned and executed in a compressed time cycle. With barely two weeks between notification and the operation's start date, there was little time to assess the Army's critical needs and even less time to coordinate exact requirements for airlift. Part of the

coordination problem rests in the second issue, the need for a mechanism to transmit and track the user's requirements.

The second aspect of interface between the Army and theater airlift providers was an inadequate means to transmit, track, and account for the Army's delivery needs. Repeatedly, USAFE and AMC reported they were unable to fill requirements because they did not know the Army's needs. This lack of means to transmit and track requirements bogged down Air Force planning efforts and led to problems during execution.⁴⁸

In conjunction with other problems resulting from a compressed planning timeline, one that specifically hindered Air Force operations was terminal requirements. The Air Force plan to interject AMC aircraft into the theater role introduced a new set of requirements for the theater – how to accommodate the influx of aircraft and how to handle beddown, support, and loading operations. Unfortunately, time worked against any attempt to assess the exact terminal

⁴⁸ This issue, the inability to transmit, track, and account for requirements, became a top priority issue with USTRANSCOM in the months following OJE. In a 21 Mar 96 study prepared by USTRANSCOM JTCC, they noted that In-Transit Visibility would help eliminate many of planning and control issues between users and airlift providers. Additionally, USTRANSCOM was tasked to provide a system to ensure all elements of ITV, will, in the near future, be compatible. To help solve these problems of ITV compatibility, USTRANSCOM developed a system called Global Transportation Network or GTN. GTN took 137 existing computer systems, used for airlift and sealift control, and reduced them to 22 computer systems. These 22 systems now feed TRANSCOM's GTN system so, that for any unit using ITV procedures, there's 100 percent accountability between all aspects of the user, provider, and support stations. Additionally, for the airlift provider there is the potential of 100 percent oversight over Army load requirements and prioritization of moves.

requirements. In the end, terminal problems led to slow and inefficient operations.

The final doctrinal problem in OJE, and somewhat a repeat of events in Operation UPHOLD DEMOCRACY, was intratheater C 4. From the outset of AMC's arrival in Europe to augment theater operations, there was a lack of understanding, procedures, doctrine, and even compatibility between C 4 systems. Several factors led to these problems.

The most significant problem for the theater command and control system was organization. Even though there was an ALCC in place to handle theater airlift planning, its staff was overwhelmed with planning and control duties. Therefore, both aspects of ALCC operations suffered. Although JP 3-17 suggests that all intratheater C 2 occur through the ALCC, JP 3-17 does not suggest how an ALCC should be formed -- other than to say the ALCC "should have a plans, operations, and support branch."⁴⁹ Given the realm of plans, operations, and support JP 3-17 leaves room for broad interpretation of who is responsible for what actions.

Understandably, the vagaries of some theater organizations and missions would not allow for a prescriptive formula in JP 3-17 for every ALCC structure and condition. However, some detail in JP 3-17 would serve two purposes that further the JFACC's ability to provide for C 2 and C 4 of augmentation forces. First, a template of a C2 organization in JP 3-17 would present an example of an acceptable structure for an ALCC. For example, one accompanying manual to JP

⁴⁹ JP 3-17.p. II-1

3-17 lays out a notional format for a JFACC. In this notional organization, enough detail is provided to render a starting point for a successful theater C2 organization. Once established or as determined by the theater specifics, the organization could then be tailored to meet specific needs.⁵⁰

The second function of an example in JP 3-17 would be aimed specifically at promoting continuity between theaters when they activate their own forces and receive augmentation. If a notional type ALCC were presented in JP 3-17, all theaters and AMC would have a baseline of “how” and “who” needs to augment a theater for specific duties. In crisis action and time-restricted operations, continuity between all staff agencies and personnel should enhance operations.

Furthermore, the wording of the section describing the AME is too broad to help the theater planner understand or appreciate the exact nature of AME duties. For instance, do AME's provide C4 equipment to communicate with theater based strategic aircraft (i.e. C2IPS)? Or, if the DIRMOBFOR is an AMC appointed officer, does the AME work for the DIRMOBFOR, and can the AME be counted on to provide planning and service support to AMC aircraft operating in the theater role? And, finally, does the AME have OPCON or TACON of strategic airlift aircraft within an AOR or are they a conduit for the TACC?⁵¹ Clarification

⁵⁰ Joint Publication 3-56.1 *Command and Control for Joint Air Operations*, 14 November 1994. Page II-6.

⁵¹ Currently many of these questions are under review by Air Force doctrinal organizations. In the recent release of the pamphlet "*United States Air Force Presentation of Forces*" (commonly known as the Little Red Book), issues such as clarification of AME duties, are being addressed by USAF XP and AMC XP.

of these kinds of issues is necessary for JP 3-17, in order to enhance augmentation operations.

In conclusion, a summary of lessons from strategic augmentation of theater operations during OJE focused on the integration of strategic and theater C2 and C4. As one knowledgeable student of airlift procedures has recently observed, “the introduction of a large scale airlift force into an unfamiliar arena of operations brings with the potential of friction where the two systems meet. However, OJE may not be an aberration, and the trend for the future may involve more combined and integrated operations. Therefore, these issues should provide areas of improvement for future doctrine.”⁵²

⁵² These comments were from discussions with Colonel Robert C. Owen. As one of the original architects for JP 3-17, Colonel Owen’s valuable insight to the general nature of “doctrine” concludes here by “providing just enough detail, in joint publications, to make them more usable” to the newly established or maturing theater airlift operation. Again, the intent here is not to dictate exactly “how” every theater should formulate or organize its operations, but rather to serve as a baseline of operations from which exact details may flow.

Chapter Four

IMPLICATIOns for standing theater airlift doctrine

Operation UPHOLD DEMOCRACY and Operation JOINT ENDEAVOR provided many lessons key to the future success of theater airlift operations. However, for the overarching doctrinal implications of these events for Joint Publication 3-17, there are eight major lessons. These generally are separated into the four elements of doctrine presented in chapter one. This review will present the implications of those lessons, but it leaves their solution to other studies.

User Requirements

The discussions in Chapter One placed overriding importance on the user requirements, which revealed that users directly or indirectly set in motion all other aspects of theater airlift operations. Therefore, the users have a prime responsibility in shaping and planning for their own aerial delivery support. From the earliest stages of a theater airlift operation, this responsibility should translate into a unity of effort between the user and the airlift provider. Without this united effort, all subsequent planning and action may be in vain.

To help unify effort, doctrine in JP 3-17 should elaborate on the user-to-provider interface. Of primary importance, the publication should clearly state that it is the user who begins the process through identification of requirements.

Additionally, this section should clarify the need for a process to transmit information back and forth between the user and the airlift provider. As noted earlier, JP 3-17 doesn't prescribe a means for the user to transmit validated requirements to the theater airlift provider, rather it simply states "services come up with their own procedures."

Unfortunately, without some guiding procedure or clarification on "how" requests are received, recorded, and answered, there is no accountability or means to oversee the request process as a whole. This results in a breakdown between the user and the provider and, as happened in OJE, the whole system came to a grinding halt while the user sorts out requirements.

One request product required during strategic airlift movements is the Time Phased Force Deployment Data (TPFDD) document. Although TPFDDs were used at times during both OUD and OJE's strategic operations, OJE especially suffered from inadequate transmission of load information between the user and airlift provider during theater operations. The TPFDD, or a similar type product, is very useful to the airlift provider because it relays the essential information the airlift planner needs to plan and schedule airlift support.⁵³ Therefore, procedurally, in theater airlift operations, the use of a product similar to the TPFDD could be a suitable means to transmit requirements from the user to the provider.

⁵³ The elements of the TPFDD are outlined in Chapter One.

Planning

Chapter One also noted that planning was at the heart of all airlift operations. Planning is the never-ending process linking together requirements, resources, constraints, conditions, and actions into a coherent and structured product to guide operations to achieve requirements of a Joint Force Commander's (JFC) objectives. Planning allows smooth and orderly transition from one phase of an operation to the next and should provide alternatives for changing conditions. However, due to limitations and constraints, planning often follows a wandering path and fails to identify the key issues blocking smooth, orderly operations.

Planning in Operation UPHOLD DEMOCRACY and Operation JOINT ENDEAVOR demonstrated that the planning process rarely anticipates all the facets of an operation. In OUD the cancellation of the forced entry operation exposed problems that otherwise may have gone unnoticed. In OJE the weather and overestimation of capability unveiled obstacles that planners had not fully identified during preparations for the mission. In both examples then, the questions remain: why was planning inadequate and are there doctrinal provisions that could help airlift planners avoid egregious oversights?

OUD and OJE both suffered from planning deficiencies, but they suffered for different reasons. In the case of OUD, the principal problems were twofold. First, the plan was buried for months on end in the special category (SPECAT) classified channels. Second, because the primary plan required such focused effort in determining the details of the airdrop, little attention was given to the other parts of the plan. In OJE, the major problem was the speed at which the

events unfolded, thereby leading to a crisis planning process versus one of deliberate planning. Looking at these three issues in further detail, some changes for JP 3-17 are noted that can enhance the planning process.

For good reasons, some operations, especially in their early stages, are labeled at a high level of security classification. Top Secret and SPECAT are meant to protect vital information. However, with the designation of Top Secret and SPECAT, commanders often lose as much as they gain because plans are not pushed down far enough in the chain of execution to ensure all levels of appropriate planning can be accomplished. Therefore, instead of suggesting, in JP 3-17, that security levels are lowered, doctrine should suggest that operations must be supported, top to bottom, with sufficient personnel cleared to accomplish the planning required.

The second doctrinal planning issue focuses on time available and how much planning can be done in a period before operations commence. In Operation JOINT ENDEAVOR, the lack of time to assess all the critical planning factors addressed in JP 3-17 hampered most execution efforts. Ironically, JP 3-17 mentions time as a limiting factor for planning and states that during periods of limited time, use previously prepared plans. However, JP 3-17 gives no suggestion on how best to plan; what size operations can be planned in a given period of time; or, especially in light of large scale augmentation operations, how much additional support is required to ensure planning is adequately completed.⁵⁴

⁵⁴ Although many of the issues noted appear too situation or condition specific, the question of adequacy of JP 3-17 largely rests with determining the nature and level of doctrine contained in JP 3-17. JP 3-17, as a joint tactics and

Therefore, the inclusion of some detailed procedures in JP 3-17 would better serve as a guide to the planning process.

In summary, neither OUD or OJE provide clear guidance on how to plan. Simply, both indicate that there are points where planning can be better. In this light, JP 3-17 provides an adequate amount of general doctrine (i.e. "what" needs to be planned), but not of specific doctrine on the "how's" of planning.

Terminal Requirements

As stated in Chapter One terminals are integral links in an airlift operation. They anchor either end of the airline of communication where loading and delivery occurs. Therefore, detailed consideration and planning for terminal requirements enhance the effectiveness of the theater airlift plan.

During both Operation UPHOLD DEMEMOCRACY and Operation JOINT ENDEAVOR, specific observations of terminal requirements indicate areas for additional clarification in JP 3-17. Addressing these early in the planning process will not only enhance aircraft capabilities but also add to seamless transitions between different phases of operations.

In OUD an oversight in terminal planning resulted in problems for the formation departing Pope AFB. The formation, containing heavily loaded airdrop aircraft, was forced to use portions of the runway not normally required during peacetime training. Although the use of this area of the runway was acceptable

techniques manual contains both general doctrine and detailed procedure for some operations and processes.

and even desired, it indicated insufficient planning to address how takeoff procedures would be affected by the departure terminal limitations.

Although JP 3-17 mentions that departure terminal requirements should be considered, it fails to address specifics for individual mission types. Obviously the example during OUD indicates that aircraft combat loaded, or any aircraft operating at wartime weights, have different performance requirements than those of normal aircraft operations. An addition in JP 3-17, reflecting these types of issues, should serve to remind crews and planners that contingency operations often exceed the factors of standard operations.

A second terminal issue surfaced during OJE that also caused inefficient operations. As the operations in Germany expanded to include large AMC aircraft into the theater flow, terminal problems constrained the effectiveness of the augmenting force. In the planning phase terminal operations revolved around requirements to support C-130s. However, when AMC arrived material handling equipment and beddown support were insufficient to meet the needs of the larger aircraft.

In sum, both of the issues for terminal operations point to areas where JP 3-17 can be broadened in its scope to ensure better support to the warfighter. In the OUD example, the terminal issue falls within the scope of details planners need to address, especially when changing from peacetime to wartime operations. In the OJE example, the terminal issue specifically applies to augmentation issues and as recent examples indicate, augmentation may be a trend for future operations.

Command, Control, Communications, and Computers (C 4)

In both Operation UPHOLD DEMOCRACY and JOINT ENDEAVOR, numerous reports concluded that major operational errors occurred because of C 4.⁵⁵ These problems ranged from high-level concerns, such as the integration of strategic aircraft into the theater system, down to low-level issues such as the compatibility of communications equipment between headquarters and subordinate units. The operations revealed at least three areas of standing doctrine are in need of review and possible expansion: better procedures for C 4 during operations with parallel lines of control; better procedures for integration of strategic aircraft into a long term theater operation; and finally, better integration of the intransit visibility (ITV)-concept.

During OUD the primary C 4 breakdown occurred during the transition from the forced entry to the permissive airland plans. Similarly, during OJE, the C 4 problems occurred during the period when Air Mobility Command (AMC) assets joined theater assets to perform in the theater role. Both of these instances reflect the complex and changing nature of theater airlift operations and the blurring of the boundary between strategic and theater operations. To support better fusion

⁵⁵ Joint Uniform Lessons Learned (JULLS). The preponderance of the data used in assessing doctrine for Operation JOINT ENDEAVOR was extracted from the JULLS systems. In total the unclassified JULLS reports regarding the theater airlift operations were documented in 251 separate JULLS reports. These reports provide a vast amount of detailed information for the Air Force planners preparing to conduct a combined strategic/theater airlift operation in support of a Joint Force Commander or Joint Task Force.

between theater and strategic airlift operations, current doctrine needs to be expanded to incorporate the details of theater augmentation by strategic forces.

Although JP 3-17 contains a chapter noting theater airlift augmentation, the extent of detail on how the interface occurs is lacking. The doctrine simply states that augmentation may occur and if it does it should be conducted in accordance with Joint Publication 0-2. However, JP 0-2 provides no additional detail on how effectively to merge theater and strategic assets into an integrated operation. The second area of C 4 operations where the OUD and OJE experiences suggest the need for doctrinal review is in the area of parallel lines of control. Parallel lines of control exist where two agencies are acting within their guidelines to control the same operation. In OUD, this situation occurred when theater-assigned C-130s were controlled both by the Air Operations Center (AOC) and the Tanker Airlift Control Center (TACC). In OJE it occurred when strategic aircraft were controlled under a murky division of authority between the AOC and the TACC. These unclear and chaotic lines led to numerous oversights and ineffective operations.

Finally, the last issue warranting attention in future theater airlift doctrine is the newly developed concept known as intransit visibility (ITV). Fundamentally, ITV is the integrated, global tracking and control system that ties all aspects and elements of delivery operations, whether land, sea, or air, into one comprehensive network accessible by all stations along the ITV net. That means that the JFC, the airlift user, the airlift provider, planning organizations, and all terminal operators have access to data on any load, any where in the world, at any time. The

information from the ITV system, in theory, ties together all the elements of user requirements, airlift planning, airlift C 4, and terminal requirements. Therefore, by using the ITV network, user and airlift planners can constantly update and load data without direct interface or conversation with the another party.⁵⁶ Thus, the inclusion of the newly developed tactics, techniques, and procedures for ITV can add to the effectiveness of JP 3-17 and go far in tying together the loose ends of other elements of doctrine for theater airlift.

Conclusions

Doctrine can not cover every possible event that unfolds in all theater airlift operations, especially in light of rapidly changing conditions. However, theater airlift doctrine, though broad in essence, must be balanced with the lessons of experience and include certain tactics, techniques, and procedures to steer not only "what" must be done, but likewise some degree of "how" things must be done.

In summary, this review has assessed the adequacy of Joint Publication 3-17 as a primary source of both general standing doctrinal guidance and as a source of specific guidance at the level of joint tactics, techniques, and procedures. Based on that review, JP 3-17, as it stands, provides clear and perhaps sufficient guidance for airlift planners and operators at the general level. Fundamentally, the general doctrinal elements of JP 3-17, are adequate to guide current operations and cover the trends revealed during the case studies. Conversely, as a Joint Tactics, Techniques and Procedures manual, JP 3-17 requires more detail.

⁵⁶ *Parameters*. Winter 97-98. Vol XXVII, no.4. p.42-58.

Further detail should be included on terminal requirements, user responsibilities, and planning. The lessons from both Operations UPHOLD DEMOCRACY and Operation JOINT ENDEAVOR will enhance the effectiveness and efficiency of future theater airlift operation support to meet the needs of the Joint Force Commander. By incorporating these minor changes, JP 3-17 will meet the requirements of providing general doctrine and sufficient detail to aid in smooth and orderly operations at the operational and tactical levels.

Glossary

ACC	Air Combat Command
ACC	Air Component Commander
AFCC	Air Forces Component Commander
ALCC	Airlift Coordination Cell
AMC	Air Mobility Command
AME	Airlift Mobility Element
AMMP	Air Mobility Master Plan
AMOG	Air Mobility Operations Group
AMOS	Air Mobility Operations Squadron
APOD	Aerial Port of Debarkation
APOE	Aerial Port of Embarkation
AOC	Air Operations Center
AO	Area of Operations
AOR	Area of Responsibility
ASOP	Airborne Standing Operating Procedures
AWADS/SKE	Adverse Weather Aerial Delivery System/Station Keeping Equipment
CINC	Commander In Chief
C2	Command and Control
C2IPS	Command and Control Information Processing System
C4	Command, Control, Communications, and Computers
COA	Course of Action

CONUS	Continental United States
CTAPS	Contingency Theater Automated Planning System
DIRMOBFOR	Director of Mobility Forces
DTS	Defense Transportation System
FEBA	Forward Edge of the Battle Area
FLOT	Forward Line of Own Troops
GTN	Global Transportation Network
IMC	Instrument Meteorological Conditions
ITV	Intransit Visibility
JFACC	Joint Force Air Component Commander
JFC	Joint Forces Commander
JOA	Joint Operations Area
Joint Pub	Joint Publication
JP	Joint Publication
JTF	Joint Task Force
JTF/CC	Joint Task Force Commander
JTTP	Joint Tactics Techniques Procedures
Little Red Book	USAF Presentation of Forces Document
LOC	Lines of Communications
MAC	Military Airlift Command
MAFFS	Modular Airborne Fire Fighting System
MOG	Maximum On the Ground
NAF	Numbered Air Force
NCA	National Command Authorities
NVG	Night Vision Goggle
OJE	Operation JOINT ENDEAVOR
OPLAN	Operations Plan
OPORD	Operations Order
ODU	Operation UPHOLD DEMOCRACY
RSOI	Reception, Staging, Onward Movement and

	Integration
SOP	Standing/Standard Operating Procedures
TACC	Tanker Airlift Control Center
TALCE	Tanker Airlift Control Element
TALO	Theater Airlift Liaison Officer
TF	Task Force
TPFDD	Time Phased Force Deployment Data
TPFDL	Time Phased Force Deployment List
USA	United States Army
USAF	United States Air Force
USN	United States Navy
USACOM	United States Atlantic Command
USAFE	United States Air Force Europe
USSOCOM	United Special Operations Command
USTRANSCOM	United State Transportation Command

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