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The debate addressing the balance of efficiencies and effectiveness regarding an organization?s resources has always existed. Some people like to look at the debate through the centralized versus decentralized management paradigm. However you view it, the contextual variables that interact to affect this balance must be taken into consideration. It is important to emphasize that this paper is not intended to pursue a ?Big Mac? versus ?Little MAC? argument. The crux of this study is to look at how the organizational design of airlift forces can influence the development and implementation of the decision-making process and the subsequent effect it will have on force structure orientation. As the threats to our national interests span a wide spectrum of conflict, it is going to become more important that our military force structure be properly sized and equipped. Additionally, given the assumption that fiscal realities will reflect a tightening of the national ?purse strings? for the foreseeable future, and our aging forces will require crucial modernization while we continue acquisition of newer advanced weapon systems, the proper balance between effectiveness and efficiencies will become increasingly critical. When money is tight, resources are limited, and everybody wants more, centralized management is definitely an option, but the need for responsiveness characterized by decentralized operations cannot be ignored. These issues must be addressed when it comes to our airlift assets. By synthesizing the historical debates that have gone on throughout the life of the Air Force, the decision-making models of Graham Allison, airlift experiences from Vietnam and Desert Storm, and the challenges of the future, one can appreciate the importance of the debate involving single versus multiple command ownership of airlift and the criticality of our Airlift System. Not unlike the resources of space and special operations, airlift is limited. And as a finite resource, my recommendation is that it should be administered by experts, and should be maintained and implemented by a single-command owner. That single-command owner should have the organize, train, and equip responsibilities for all Air Force airlift assets, while operational control (OPCON) of applicable theater lift assets should reside with the respective warfighting Commanders-in-Chiefs (CINCs).

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# EFFECTIVENESS VERSUS EFFICIENCY:
# ORGANIZATIONAL DESIGN AND ITS IMPACT ON AIRLIFT

BY
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A THESIS PRESENTED TO THE FACULTY OF
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## *About The Author*

Major John W. McDonald was commissioned through the Reserve Officer Training Corps, Florida State University, in 1983. Graduating as a Distinguished Graduate from Undergraduate Navigator Training in 1984, he was assigned to the 463d Tactical Airlift Wing, Dyess AFB, Texas to fly on the C-130H as a navigator and instructor navigator. Following an assignment to the United States Air Force Academy as an Air Officer Commanding, Major McDonald was assigned to Headquarters, Air Mobility Command at Scott AFB, Illinois. While at AMC he was assigned to the Directorate of Plans Long-Range Planning Office and later served as the Executive Officer to the Director of Plans. Major McDonald is a senior navigator with over 1600 flying hours. He has a Bachelor's of Science Degree in Accounting from Florida State University, and a Master of Business Administration in Organizational Management from the University of Colorado. Major McDonald was a Distinguished Graduate from Air Command and Staff College, and upon graduation from the School of Advanced Airpower Studies was assigned to the 463d Airlift Group at Little Rock AFB, Arkansas. Major McDonald is married to the lovely Bonnie High of Bradenton Florida and has two children, Ryan and Katie.

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## *Abstract*

The debate addressing the balance of efficiencies and effectiveness regarding an organization's resources has always existed. Some people like to look at the debate through the centralized versus decentralized management paradigm. However you view it, the contextual variables that interact to affect this balance must be taken into consideration. It is important to emphasize that this paper is not intended to pursue a "Big Mac" versus "Little MAC" argument. The crux of this study is to look at how the organizational design of airlift forces can influence the development and implementation of the decision-making process and the subsequent effect it will have on force structure orientation. As the threats to our national interests span a wide spectrum of conflict, it is going to become more important that our military force structure be properly sized and equipped. Additionally, given the assumption that fiscal realities will reflect a tightening of the national "purse strings" for the foreseeable future, and our aging forces will require crucial modernization while we continue acquisition of newer advanced weapon systems, the proper balance between effectiveness and efficiencies will become increasingly critical. When money is tight, resources are limited, and everybody wants more, centralized management is definitely an option, but the need for responsiveness characterized by decentralized operations cannot be ignored. These issues must be addressed when it comes to our airlift assets. By synthesizing the historical debates that have gone on throughout the life of the Air Force, the decision-making models of Graham Allison, airlift experiences from Vietnam and Desert Storm, and the challenges of the future, one can appreciate the importance of the debate involving single versus multiple command ownership of airlift and the criticality of our Airlift System. Not unlike the resources of space and special operations, airlift is limited. And as a finite resource, my recommendation is that it should be administered by experts, and should be maintained and implemented by a single-command owner. That single-command owner should have the organize, train, and equip responsibilities for all Air Force airlift assets, while operational control (OPCON) of applicable theater lift assets should reside with the respective warfighting Commanders-in-Chiefs (CINCs).

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# Chapter 1

# Introduction

*"Aerospace power is most effective when it is focused in purpose and not necessarily dispersed."*[1]

"In the final Quadrennial Defense Review report, defense officials reaffirmed that the US must be able to fight two Major Theater Wars at more or less the same time. They further concluded that without a healthy and up-to-date air mobility force, hopes of achieving that strategic goal would be little more than wishful thinking."[2] Some would go on to point out that if your strategic lift assets are limited, you may be liable to lose one of the wars; while if you lack theater tactical lift you possibly may lose them both.[3] As the Department of Defense budget becomes more constrained and demands for limited resources continue, calls for efficiencies balanced with risk-measured effectiveness in operations will rise. There is no reason to believe there will be any relief from the consequences of reduced defense budgets for the future. "The Pentagon's Quadrennial Defense Review . . . was a cutting machine that lopped off personnel and force structure in many mission areas. . . . QDR officials recognized that smaller forces might be adequate to their missions if and only if, they could be transported swiftly over great distances."[4] Transporting American forces "swiftly" in order to halt an attack on or provide positive support of some vital national interest is the job of the Military Airlift

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[1] Air Force Manual 1-1, *Basic Aerospace Doctrine of the United States Air Force*, vol. 1, March 1992, 8.
[2] John A. Tirpak, "Airlift Gets a Boost," *Air Force Magazine*, December 1997, 26.
[3] Dr. David R. Mets, School of Advanced Airpower Studies, Maxwell AFB, AL., interview with author, 14 April 1998.
[4] Tirpak, 26.

System. That system, composed of primarily organic capabilities of the C-5, C-17, C-130, and C-141 force structure supplemented by the Civil Reserve Air Fleet, and limited numbers of the KC-10 fleet, must be seamless and arguably managed by a single airlift manager to ensure that the many diverse, yet interlocked components of airlift work well together and function effectively as a whole.[5] As a result, doctrinal issues concerning assignment of forces must be addressed to guarantee we are allowing ourselves the utmost in flexibility to meet a wide spectrum of possible taskings in support of our National Command Authority. Limited resources, declining monies, and increased operational demands arguably all point toward a centralized single ownership/management of airlift, much like the management of Air Force space assets. Spreading limited airlift resources across three different commands is somewhat like the initial assignment of combat support aircraft during World War II in the North African campaign. As was the case then, the consolidation under a single manager at the appropriate level given the situation and corresponding objective, will result in the proper blend of efficiencies and effectiveness not otherwise possible. Additionally, standardizations, decreased duplication where applicable, and properly organized, trained, and equipped warfighting units will better be able to support theater Commanders in Chiefs (CINCs).

As the overseas forward basing becomes more limited, our mobility assets are more heavily dependent on supporting forces (i.e., mobility infrastructure) to ensure it can project the necessary power to protect the security of our national interests. This realization is not new, and in fact was promulgated by Henry "Hap" Arnold, Commanding General, Army Air Forces, in a letter to General Carl Spaatz as Gen Spaatz was about to replace him as the Commanding General in 1945:

> "I have long felt that the Air Transport Command has a unique value which had never been fully appreciated throughout the Air Forces. The contribution which it has made and can make to national security . . . is little understood but of vital importance. As a result of my experience . . . , I firmly believe that an essential component of American air power is an integrated autonomous single Air Transport Command, reporting directly

[5] Lieutenant Colonel Chris J. Krisinger, "Towards a Seamless Mobility System: the C-130 and Air Force Reorganization," *Air Power Journal*, Fall 1995, 30-45.

> to the Commanding General, Army Air Forces. I believe that it is an essential instrument to the Commanding General, . . . , in the accomplishment of his mission, in the execution of national aviation policy, and in the fostering and retention of an autonomous Air Force. I believe it offers a means of insuring our capacity to support the immediate world-wide deployment of our Armed Forces; of contributing materially to the autonomy of the Air Forces; and of serving as the connecting link between our deployed Air Forces; giving essential unity to the Air Forces command. . . . The Air Transport Command is the Air Forces' and the War Department's high speed physical connecting link between headquarters and the field commands."[6]

General Arnold went on to further elaborate. "Air Transport Command . . . should provide air transportation from the United States bases to all overseas bases and between such bases in different area commands."[7] In today's vernacular, General Arnold is referring to the contentious issue regarding theater ownership of airlift assets. He concludes his letter to General Spaatz on the subject of the organizational design of Air Transport Command by reemphasizing a strong personal conviction regarding warfighters and airlift assets:

> "In time of war the authority of the Theater Commander in his area is paramount. This is as it should be, and I have no reason to believe that such will not continue to be the case. The Air Transport Command has always been an exempted agency operating into and through the various theaters. This principle should be retained. These operations have had a great effect in maintaining the unity of overall Air Force organization, control and perspective. They have given me an opportunity to keep my fingers on the pulse of Air Forces activities in the various theaters and to observe firsthand the part of the Air Forces is playing in the logistical and tactical support of the combat units. Of equal importance, it gives one an opportunity to preserve a world-wide viewpoint so essential in present military philosophy."[8]

Though the arguments for and against the consolidation of airlift are not new, and the airlift world has seen its organizational design altered on many different occasions since its inception, the debate continues. Following Operation JOINT ENDEAVOR, an

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[6] General H. H. Arnold , letter to General Carl Spaatz, 6 Dec 1945, Air Mobility Command Historian.
[7] ibid.
[8] ibid.

Air Mobility Command (AMC) White Paper was prepared for General Robert Rutherford, then Commander, Air Mobility Command (AMC/CC), and more importantly, Commander-in-Chief United States Transportation Command (CINCUSTRANSCOM), that communicated a "concern with our ability as an Air Force to balance the direction and control of our strategic and theater airlift systems."[9] The paper poses the question, should the resources and infrastructure support of airlift be treated as a system, regardless of the theater and strategic biases that have somehow developed within the Air Force and throughout the joint community? Or, should there be a delineation between the two aspects of airlift, intra and intertheater? Furthermore, how does the organizational design based on ownership of resources affect decision-making in regards to airlift forces?

Though C-130s can perform a strategic intertheater lift operation and the C-17 was specifically built for both missions, the main issue revolves around the fact that airlift is a critical enabler of force projection and sustainment. Given this, and the aforementioned limited resources, budgets, and rising requirements, civilian leadership of the military will demand more efficiency today and in the future, while the theater CINCs will continue to demand effectiveness in the execution of their contingency plans. What is best to answer these demands? Single or multiple manager? General Rutherford was so concerned that he requested the Air Force Chief of Staff to "call a mini-summit . . . including the commanders of AMC, ACC, USAFE and PACAF, as well as the DCINCEUR."[10] As a result, the topic was discussed during the Four-Star CORONA Conference in June of 1996. Following the conference it was announced that all CONUS C-130s would transfer from Air Combat Command to Air Mobility Command effective 1 April 1997. However, the overseas major commands, USAFE and PACAF, retained ownership of their C-130 aircraft. This situation created a multiple command ownership structure for a significant capability of a seamless airlift system. While this arrangement provides ownership of assigned assets to theater commanders, it has complicated the airlift equation from the customer's perspective. Additionally, the arrangement has possibly made the balancing of operational efficiency and economic optimization desired

[9] Air Mobility Command White Paper, *Reviewing the Airlift System*, (Scott AFB, IL.: HQ AMC/XPDSP, 1996), Cover Letter from AMC/CC to CSAF.

in peacetime harder to achieve, while allowing for a necessary measure of combat effectiveness required in wartime operations. Facing the fiscal realities of constrained defense budgets, Quadrennial Defense Review (QDR) downsizing requirements and the need for weapon system modernization, the current organizational structure providing individual theater assigned airlift assets may be a luxury. However, optimum organizational design is rarely black and white, and there is a constant struggle between effectiveness and efficiencies. But, the lack of constant attention to the organization's primary purpose and negligence towards its long-term enhancement, may result in a structure that emphasizes peripheral functions and impedes the accomplishment of fundamental objectives. As our warfighting CINCs have the imperative to achieve military objectives in support of national objectives, functional CINCs have a responsibility to ensure optimum management and use of limited national assets.

## Research Description

The controversy concerning the integration of the airlift resources to develop a truly "seamless" system has traditionally centered around command and control of resources. Of equal or possibly more importance, are the decision-making tendencies of the different organizational designs associated with those resources. The interacting processes characteristic of single versus multiple ownership may prove to be enlightening and invaluable in force structure alignment decisions. Additionally, the organizational design of a national asset could be expected to directly affect operational capabilities across the myriad of possible contingencies.

This study proposes that this alternative consideration, organizational design, should be addressed when debating the alignment of airlift forces. More than just command and control issues, much may be gained by understanding the decision-making process associated with different organizational designs. Through the use of Graham Allison's decision-making models and past experiences, current capabilities, and future requirements, this paper will offer additional input to the traditional ownership debate that may lend itself towards better efficiencies and maximizations of limited resources

[10] ibid.

while maintaining effectiveness. Whether we are considering the allocation of planes, people, support equipment, or critical dollars to be spent wisely against modernization and acquisition requirements, value maximization is imperative.

To show how this complementary insight can be achieved, I will focus on the three decision-making models discussed in Allison's book, *Essence of Decision*:

1. **Model I - The Rational Actor:** "Rationality refers to a consistent, value-maximizing choice within specified constraints."[11] The attempt to explain events by recounting the aims and calculations is the norm, as the decision maker assumes an action is chosen as a result of a calculated solution to a problem. The basic concepts include a unitary actor, goals and objectives, alternatives, consequences and finally the choice, which consists of selecting the alternative whose consequences rank highest in the decisionmaker's payoff function.[12] The actor compares costs and benefits and maximizes the outcome.

2. **Model II - Organizational Process:** Behavior according to the second conceptual model is understood less as deliberate choices and more as outputs of large organizations functioning according to standard patterns of behavior (i.e., processes or actions determined by regulation or pre-determined policy). An organization design that requires the efforts of large numbers of people to be coordinated in order to perform complex routines can result in decision-making in which the leader cannot substantially control the behavior of the entity but maybe only disturb it.[13]

3. **Model III - Governmental Politics:** "This characterization captures the thrust of the bureaucratic politics orientation."[14] Participants in this organizational design have independent bases, but share power. Each has a position that confers separate responsibilities, and each is committed to fulfilling those responsibilities as he sees fit. This model is representative of the cliché "you scratch my back, I'll scratch yours," and

[11] Graham T. Allison, *Essence of Decision* (Harvard University: Harper Collins Publishers, 1971), 30.
[12] ibid, 13-30.
[13] ibid, 67-69.
[14] ibid, 145.

characteristic of “logrolling” activity. Naturally, one would not expect the emphasis to necessarily be put upon maximizing resources, or rational decisions.

The study will focus on a macro level analysis of organizational design for an operation and how it can influence decisions. Some of the underlying assumptions of this thesis are:

1. Budgetary authorization levels will at best remain as they are now, and planned through the next five-year defense plan (FYDP), with expectations of declining defense budgets being realistic.

2. Acquisition of airlift force structure for active-duty units will be limited to the approved 120 C-17 aircraft.

3. The C-141 retirement schedule will continue as scheduled.

4. The National Security Strategy requiring the ability to fight and win two nearly simultaneous MTWs will continue to drive operational planning.

5. Warfighting CINCs will advocate for, and fund acquisition and modernization of “shooter” assets, munitions, and the corresponding support requirements before allocating resources to theater airlift.

6. Due to the differing expectations and emphasis of civilian governmental leadership regarding requirements of a peacetime airlift system and one operating in wartime, the military airlift system benefits from being as seamless as possible.

7. Due to defense system drawdowns, the applicable industrial base has dwindled and would not be capable of an accelerated “spin-up” to support massive production or modernization of military assets as was the case prior and during W.W.II.

By looking at two historical cases and considering future requirements, the reader should gain an appreciation for expected results associated with the individual decision-making process and organizational designs. Finally, I will provide an analysis of notional alternatives for the organizational design of our airlift resources and elaborate on expected resultant efficiencies and effectiveness.

# Chapter 2

# Evolution of Airlift's Organizational Design

> *"Rapid Global Mobility provides the nation its global reach and underpins its role as a global power."*[15]

"In 1908, the Army contracted with the Wright brothers to develop and produce the service's first airplane. Among numerous other stipulations of this historic agreement was a requirement that the Wrights deliver a flying machine small enough to be hauled in a big Army wagon."[16] The tables have turned since 1908. Today's airlifters are specifically designed to carry critical equipment necessary for all services to conduct most military operations. In the future, with the exploitation of space and its force enhancement mission, it is conceivable that lift assets will have the capability to "reach Mach 25, deliver payloads of up to 50,000 pounds anywhere on Earth within an hour, and land vertically on pads no larger than 300 square feet."[17]

Though this chapter is not to serve as a primer on all aspects of the evolution of Air Force airlift forces, their capabilities, or the historical legacy of its organizational development, it will provide the reader with a view of events influencing its organizational growth. The background begins in 1948 with the establishment of the Military Air Transport Service and concludes with the 1997 organizational change

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[15] *Global Engagement: A Vision for the 21st Century Air Force* (Washington, D.C.: Government Printing Office, 1997) 12.
[16] Bruce D. Callander, "The Evolution of Air Mobility," Air Force Magazine, February 1998, 69.
[17] ibid, 73.

directed by then Air Force Chief of Staff, General Ronald Fogleman.[18] Throughout the evolution, the reader should be able to identify patterns of thought and recognize influences that have had a substantial impact on the dynamic design of our airlift system.

Beginning with the limited consolidation that established the Military Air Transport Service and the lessons learned during the Berlin Airlift and Operation SWARMER, the reader should begin to appreciate key components that contribute to an integrated airlift system and its potential benefits. However, due to the Korean conflict, leadership changes, and the changes in National Strategy resulting from the Cold War, the reader will see that a seamless system never came into being and our airlift posture going into the Vietnam conflict resulted in lessons learned that contributed to changing the entire design and organization of airlift forces. Those lessons were proven during Desert Shield/Storm when airlift provided the flexibility necessary to project the initial halting forces into Saudi Arabia and subsequent sustaining supplies. However, not everyone appreciated the tool that a consolidated, seamless airlift system could provide. They discounted all the advantages of a national airlift system in favor of the theater commanders owning theater airlift and creating duplication and inefficiencies to gain some limited amount of effectiveness.

## The Beginning of MATS

With the signing of Secretary of Defense (SECDEF) Memorandum, "Organization and Mission of Military Air Transport Service (MATS)," dated 3 May 1948, by Secretary James V. Forrestal, military airlift received the initial recognition necessary to set it apart as a critical asset in defense of the nation. The memorandum consolidated the activities and assets of the Air Force's Air Transport Command and the Navy's Air Transport Service. Due to the determined effort of Secretary of the Air Force Stuart Symington,

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[18] An account of the evolution of Airlift can be found in Charles E. Miller's *Airlift Doctrine*, (Maxwell AFB, AL: Air Univ Press, 1988), Robert F. Futrell's *Volume II: Ideas, Concepts, Doctrine: Basic Thinking in the United States Air Force 1961-1984*, (Maxwell AFB, AL: Air Univ Press, 1989) and Military Airlift Command Office of History, *Anything, Anywhere, Anytime: An Illustrated History of the Military Airlift Command, 1941-1991*, (Scott AFB, IL.: Headquarters Military Airlift Command, 1991).

MATS was chartered to provide the point-to-point aerial logistics support for the national military establishment and other government agencies. The memorandum specifically excluded MATS from the tactical airlift role and left the responsibility for airborne operations and the resupply of forward deployed combat units with the theater commanders and their Troop Carrier units.[19] This decision was to be a source of continual discussion through the development of the airlift system, and topics related to inter versus intratheater airlift continue to be debated today.

The consolidation of strategic airlift could not have occurred at a better time; the first test of the Cold War was about to begin. Before the ink could dry on the SECDEF Memorandum, the Soviet Union blockaded the land and water routes necessary to supply the city of Berlin. MATS was about to be tested and airlift was going to face what many thought to be an insurmountable task. However, airlift proved its resiliency and laid the foundations for the advocacy of centralized control as it stood up to the challenge and exceeded all expectations.

## The Berlin Airlift

As the dust began to settle on post-war Europe, the Soviet Union sought to project itself as a world power and the jointly-occupied city of Berlin was to be used as their stage. As the Allies pushed for an independent West German state, tensions increased and on 24 June 1948 the Soviets "cut off all food supplies and electricity to Berlin, making the excuse that it was the result of a technical difficulty."[20] By 26 June, General Lucius Clay, American Commander in Germany estimated that the needs of Berliners could be met by airlifting 4,500 tons of coal and necessary food stuffs daily, and tasked Lieutenant General Curtis LeMay, Commander, United States Air Forces in Europe (USAFE), to organize the necessary effort. General LeMay, in turn, appointed Brigadier General Joseph Smith to take charge of the effort. Initially, many believed the operation

[19] Lieutenant Colonel Charles E. Miller, *Airlift Doctrine*, (Maxwell AFB, AL.: Air Univ Press, 1988), 174.

[20] Military Airlift Command Office of History, *Anything, Anywhere, Anytime: An Illustrated History of the Military Airlift Command, 1941-1991*, (Scott AFB, IL.: Headquarters Military Airlift Command, 1991), 69.

would be short-lived, and the theater-oriented Smith was confident that the assets of his two Troop Carrier Groups, the 60th and 61st with their 102 C-47s and two C-54s complemented by some British C-47s, would be more than capable to accomplish the task at hand.

Though the airlift was a USAFE operation, it became evident that USAFE did not have the necessary expertise and forces to conduct the airlift. "Anticipating that the airlift probably would extend into the winter," Air Force Chief of Staff Hoyt S. Vandenberg later urged the National Security Council to "go in wholeheartedly" with more airplanes and the most-experienced airlift operational leader available.[21] President Truman authorized the expansion, and on 23 July MATS sent eight C-54 squadrons to Germany, along with Brigadier General William H. Tunner," MATS Deputy Commander for Operations, "to act as overall airlift commander."[22]

Though not in direct control of the airlift operation, MATS was very much involved as Tunner took the reins. MATS "trained replacement crews, moved aircraft, furnished transatlantic airlift and coordinated maintenance" for the operation.[23] Brigadier General Tunner immediately realized the scope of the operation and promptly "integrated the aircraft into a conveyor belt-type flow"[24] and streamlined other procedures to increase efficiencies, resulting in greater tons of supplies delivered. From instituting instrument flight procedures and standard arrival procedures, to predictable loading operations, aircrew planning, and aircraft maintenance schedules, Tunner was determined to turn the system into one that operated with "precise rhythmical cadence."[25]

From the beginning of the conflict (airlift), the Soviets were convinced that the airlift alone could not support the needs of Berlin. But, as the operation proved itself through the winter of 1948-1949 their resolve eroded. The airlift infrastructure was in place to support the people of Berlin for as long as necessary. When the blockade was lifted, airlift had proved to be a vital instrument of national policy. After 279,114 flights,

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[21] Colonel Robert C. Owen, *The Rise of Global Airlift in the United States Air Force 1919-1977*, (work in progress), 2.
[22] ibid.
[23] *Anything, Anytime, Anywhere*, 69.
[24] Miller, 178.

delivering 2,324,257 tons of supplies, Operation VITTLES was officially ended on 31 October 1949.[26] As airlift had proven its value on a grand scale, organizationally an underlying paradigm had shifted. "The Berlin airlift was a change in emphasis for tactical air transport . . . from airborne assault to routine airlift services within a theater. . . . the Berlin airlift reinforced the view that differences between strategic and tactical airlift were unnecessarily costly and duplicative."[27]

## Post-Berlin Military Air Transport Service

Selected to be the first Commander of Military Air Transport Service, Major General Laurence Kuter was determined to stress the importance of strategic airlift, which he defined as: "the sustained mass movement by air of personnel and material to any part of the world in support of a military effort, in conformity with overall strategic requirements of that effort, and supervised by the highest echelon of command concerned."[28] He told Air War College Students that "MATS should not be considered an airline. . . . it was a skeleton organization equipped with basic route facilities, aircraft and personnel . . . which can be expanded rapidly in time of national emergency."[29] Kuter was a champion of global airlift. In his report on the Department of Defense (DOD) airlift forces and operations, Kuter recommended that the Air Force should realign these resources. He asserted that the continued fragmentation of MATS and Troop Carrier aviation was "wasteful and violated the intent of airlift regulations and presidential directives." Always aware of the orientation of the current Air Force leadership to the support of Strategic Air Command (SAC) and the bomber force, Kuter argued that "transport and troop-carrier missions would not necessarily overlap in time, so a fully-consolidated air transport force could be more readily diverted to other priority requirements" after SAC was in-place and provided for by surface means. "In combination with the economic advantages of consolidation, these military considerations

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[25] ibid, 174.
[26] *Anything, Anytime, Anywhere*, 71.
[27] Miller, 182.
[28] ibid.
[29] Owen, 5.

led Kuter to recommend that all air transport functions and all first-line transport aircraft be assigned to MATS."[30]

Kuter's demands fell on deaf ears. His airlift report and recommendation for consolidation were absorbed by the air staff without action. Generals Kuter and Tunner were faced by substantial economic and doctrinal obstacles before they could gain a constituency of global airlift supporters--they needed more proof for their argument. Exercise SWARMER, conducted in North Carolina during April and May of 1950, was the evidentiary foundation they needed.

## Exercise SWARMER

Designed to test the capability of the Air Force and Army to maintain and operate an airhead wholly within enemy held territory, SWARMER was the first application of "a strategic seizure of an area with airlanded paratroopers and airlift sustainment of the airlanded force."[31] SWARMER planning involved the airdrop of three regimental combat teams and the airlanding of an additional two. This was the first maneuver on an Army Corps scale since World War II and it uniquely tested several airlift concepts. The exercise exceeded the capabilities of Tactical Air Command troop carrier forces, so augmentation was provided by MATS assets. In fact, Major General Kuter was well aware of the importance of this event and ensured that MATS provided one-third of the nation's airlift capability to the exercise. The participating airlift force was larger than the force that supplied Berlin. The critical difference was that the crew ratio for the Berlin Airlift was greater than that of SWARMER. For the first time, troop carrier and air transport forces would be melded into a consolidated force to perform as an airlift system.[32]

To ensure the implications of joint TAC - MATS airlift operations would not be missed, the overall Air Force Commander of SWARMER was Air Force Deputy Chief of

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[30] ibid, 6.
[31] Lieutenant Colonel Thomas J. Ream, *Theater Airlift Management: Organizing for Success in Theater War* (Maxwell AFB AL.: ARI Command-Sponsored Research Fellow, Air Mobility Command, 1995), 51.
[32] Miller, 190.

Staff for Operations, Lieutenant General Lauris Norstad. Norstad, coincidentally, had written the Air Staff's first airlift consolidation plan in 1945. Additionally, Lieutenant General Norstad named Brigadier General Tunner to command the consolidated airlift operations. "Whatever other lessons came out of SWARMER, one could almost have foretold that it would prove the operational and organizational unity of airlift."[33]

Given SWARMER's size and the attention it had drawn, there were numerous lessons learned. Arguably, the most important lesson concerning airlift organizational design was that the system of managing airlift was proven deficient. From the organizational command and control structure to the communications necessary for coordination, critical procedural practices were absent . This lack of integrated operations was "eye opening." None of the services could support their own long-haul communications requirements under tactical conditions. Another lesson learned was that the MATS airlift force structure did not possess the flexibility to conduct such an operation. Primarily a non-tactical organization, they were not properly equipped to sustain operations at a forward operating location. MATS was organized, trained, and equipped to perform long-range, intertheater airlift, not a "Berlin-type airlift under combat conditions."[34]

Nevertheless, the air task force commander, Brigadier General W.R. Wolfinbarger, concluded that a principal benefit to come out of the exercise was maximizing the role of airlift in modern warfare:

> "From the Air Task Force point of view, the highlight of the exercise was the integration of Troop Carrier and Strategic Air Transport elements into a single Air Transport Force. It demonstrated to my complete satisfaction that Troop Carrier and Air Transport concepts are capable of successful combination and that the two elements, when jointly employed, logically and successfully complement each other in this type of operation."[35]

Lieutenant General Norstad was more blunt with his after-action comments suggesting that the tactics and techniques of air transport where leftover from the "horse and buggy days." He said, "there will always be a shortage of transport type aircraft and we cannot

[33] Owen, 16.
[34] Miller, 192-193.
[35] *Anything, Anytime, Anywhere*, 74.

carry out an expansion of our air transport force until we are sure we have done everything we can to maximize the utilization of what we already have."[36] However, before any recommendations could be acted upon, Air Force airlift forces were plunged into supporting the ground forces' halting efforts in Korea.

## Airlift and the Korean War

Prior to 25 June 1950, theater airlift in the Pacific theater was provided by the 375th Troop Carrier Wing. These forces provided scheduled courier service and provided airlift in support of Army and Air Force tactical exercises and special missions. Theater airlift at this time was a service in limited demand, so efficiency was not much of a consideration. However, when the North Korean forces began their invasion, the demand for all lift surged. Requirements to move U.S. nationals to safety, requests for immediate shipments of munitions and critical supplies to the battered Republic of Korea forces, and the movement of U.S. Army and Air Force units from Japan to the peninsula far exceeded the lift capabilities in the first months of the conflict.[37] Though severely handicapped by a shortage of aircraft and usable airfields, efficiency was unnecessarily hampered by a lack of expertise on the part of established theater command and control system. "According to the Far East Air Force's (FEAF), *Report on the Korean War:*

> In commission aircraft were sometimes not scheduled; flights were made with zero load to pick up cargo at distant points; whole shipments were overlooked or misplaced for days at a time; low priority material was moved; and aircraft were held on the ground for excessive periods in order to insure timely delivery of very high priority equipment."[38]

While havoc characterized intratheater operations, things were only slightly better for the intertheater concerns.

MATS was responsible for providing the strategic airlift necessary to sustain the war effort in Korea. Unfortunately, MATS was ill-equipped for the task and it may have been symbolic that the first American aircraft lost was not a fighter, but a MATS C-54

[36] Miller, 194.
[37] Ream, 53.
[38] ibid.

supporting the United States Korean Military Advisory Group. Grounded at Kimpo Airfield due to a damaged wing, the C-54 was destroyed on the first day of the war. [39] The irony of this event could reflect the state of an airlift system that many argued emphasized efficiencies at the risk of effectiveness and responsiveness.

As Commander of MATS, Major General Kuter immediately began to augment MATS' prewar fleet of 212 aircraft by expanding civilian contract operations. Additionally, Major General Kuter took control of all Air Force four-engine transports not already committed to the Korean operation.[40] Meanwhile, Brigadier General Tunner, as MATS Deputy Commander for Operations, was scrambling to rebuild the "atrophied" Pacific airlift infrastructure to provide a solid foundation for expected expansion. But unfortunately, the good intentions of all those involved were not coordinated and efficiencies and critical effectiveness was suffering.[41]

As demands on the airlift system increased and planning for the Inchon invasion began in earnest, it became obvious to Lieutenant General George E. Stratemeyer, FEAF Commander, that airlift forces needed to be orchestrated under tighter control. The tactical situation and the heavy demand for airlift could not withstand continued inefficiency. In order to maximize service efficiency and effectiveness, centralized control at the theater level was needed in order to move cargo to the correct place at the correct time while maximizing the use of the limited airframes.[42] Stratemeyer had seen the operation he needed in action before. While the Commander of the Chinese-Burma-India theater of World War II, he had worked with an air transport leader whom he believed could obtain the results demanded. Stratemeyer asked Headquarters Air Force to assign Brigadier General Tunner to the FEAF to straighten out and consolidate theater airlift operations.

To wrap his hands around combat cargo operations, Tunner established an in-theater Combat Cargo Command (COCARCOM) and made significant changes in the field. A central request system that influenced airlift support was developed, and no

[39] *Anything, Anytime, Anywhere*, 74.
[40] Ream, 58.
[41] Owen, 20.
[42] Ream, 54.

longer was there a 70 percent allocation of lift fenced for Army operations and the remaining 30 percent tagged to Air Force requirements. Requests were formalized and prioritized to ensure efficiencies were maximized; this critically limited resource was operated at its proper utilization rate. Tunner also established aerial port operations in Korea to standardize loading procedures and greatly reduce ground times. His "tightly controlled and centrally managed system increased the productivity of the theater airlift force, by (1) preventing unauthorized diversions in the parochial interest of subordinate organization commanders, and (2) permitting individual aircraft, missions, or even operational focus of the entire airlift effort to be redirected or repositioned quickly."[43] Stratemeyer had tapped a "strategic intertheater" expert to shape the "tactical intratheater" operation.

For the most part, the relationship between MATS and Troop Carrier components during Korea worked well. One operational success in some opinions, was the consolidation of troop carrier and air service operations and tasks under Tunner's COCARCOM. "Citing good experience with this organization, which could handle airborne operations and air-delivered supplies, Tunner proposed . . . that in the interest of both economy and efficiency the Air Force ought to unify all of its air transport organizations."[44] But others did not agree. The Army disagreed as Futrell notes, "The Army Field Forces were reported to oppose any move to remove troop carrier aviation from the tactical air forces and to place it in a consolidated air transport command."[45] One reason for this position may have been a fear that consolidation would lead to reorienting the troop carrier mission to one less supportive of the Army. Lieutenant General John K. Cannon, Commander, Tactical Air Command (TAC), was also quick to express his opposition to any consolidation. Lieutenant General Cannon insisted that "troop carrier units are combat units." Cannon's position was that these units were weapons of war and just like fighter-bombers, submarines or tanks; therefore, troop carriers were tactical aviation and as such belonged in TAC. Lieutenant General Cannon

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[43] Owen, 22.
[44] Robert Frank Futrell, *Volume I Ideas, Concepts Doctrine: Basic Thinking in the United States Air Force 1907-1960* (Maxwell AFB AL.: Air Univ Press., 1989), 311.
[45] ibid.

stated, "any proposal to merge troop carrier and all air transport units into one air transport organization is basically in error in that it combines combat functions with service functions."[46] This was a paradigm that the Air Force would not break until 1974. It is easy to appreciate how Lieutenant General Cannon's ideas pertaining to platforms and missions definitely were influential in determining his view of attaining desired effects in an efficient way with limited resources.

## Things Change, But Stay The Same

In Charles E. Miller's, *Airlift Doctrine*, the years following the Korean War through the mid-1960's are referred to as "The Turbulent Years". Repeated discussions in the nation's capital involving congressional investigations and service "turf battles" continued to examine the operational aspects of the nation's airlift system because of its capability to quickly deploy and employ forces.[47] However, most of the basics of airlift management and organizational design had been proposed, developed and articulated and a relatively well-developed tandem system of airlift was in place. Theater airlift was operating with procedures carried over from Brigadier General Tunner's provisional COCARCOM from Korea, while MATS' strategic orientation had proven its importance to national defense. But one thing did occur that would have a tremendous effect on the efforts for airlift advancement and consolidation.

The staunch supporters of centralized inter and intratheater airlift management, Generals Kuter and Tunner, were replaced at MATS by a commander more disposed to supporting the "main stream" thoughts of the Air Force. As Kuter once argued for the uniqueness that airlift capability possessed, General Joseph Smith argued quite the contrary. General Smith's lack of airlift experience, and his lack of desire to pick up

[46] ibid.

[47] Miller, 235. Lt Col Miller devotes the entire of his Chapter 5, pp 235-291, to the discussion of contextual elements effecting the nation's airlift policy, Congressional activities, and Presidential concerns. As a result of all these different influences, the organizational design remained the status quo, i.e., MATS was responsible of intertheater airlift, while TAC retained their ownership of troop carrier or intratheater airlift.

where his predecessor had left off, did not endear him with "heart and soul" advocates of centralized airlift.

Under General Smith's tutelage MATS was first, last and always going to be the logistical arm of the SAC. The course of airlift policy during his tenure was tied closely to the "New Look" strategy of the Eisenhower administration. The "New Look" strategy was formulated to account for the emerging power of the nuclear arsenals of the United States and the Soviet Union. He had dismissed Major General Kuter's plan for airlift consolidation as merely empire building and set himself as a "rock" across the path of progressives within MATS that shared the global airlift vision. On the other hand, he was cast as a "good shepherd" by senior Air Force leaders for his ability to guide MATS towards obedience and productive compliance with Air Force strategic priorities. As long as airlift was able to support the movement of the necessary logistics tail for the Air Force's strategic bombers, that was all that was necessary. The national strategy of massive retaliation demanded no less, and the budgetary constraints and service priorities would allow no more.[48]

## Changes in Organization as a Result of Vietnam

As the political leaders of the United States became consumed by the conflict in Vietnam, the Services grew increasingly weary of the spread of communist ideology and their ability to contain it. The military's force structure and inventory was caught off guard. Services found themselves making do with what was on hand, and future plans were adjusted to align with the new direction. For MATS it meant a change in name and orientation. Insisting that MATS be given the prestige of a Command designation, Rep L. Mendel Rivers, Chairman of the House Committee on Armed Services, authored an amendment to the military procurement authorization bill to make the change official. On 1 January 1966 the Military Air Transport Service became the Military Airlift Command (MAC). Given that the Kennedy and Johnson administrations were committed to a military strategy of flexible response, the size of the forces ultimately required to terminate a conflict favorably would be influenced by how fast that force could be

brought to bear on the situation. MAC's charter was to develop a type of combat airlift without precedent.

When General Howell M. Estes, Jr. assumed command of MAC, he approached the challenge in a way reminiscent of Generals Kuter and Tunner. General Estes wrote that "the classic lesson of strategic mobility was that there was no classic lesson--except to be ready for anything, anywhere, at any time."[49] Estes believed "the role of modern combat airlift . . .is to airlift combat forces and all their battle equipment . . . to any point in the world, no matter how remote or primitive, where a threat arises or is likely to erupt." [50] Even with these powerful words Estes was up against strong internal Service parochialism. As a result of the operations in Korea and the entrenchment of ideology concerning tactical versus strategic operations, airlift was viewed as performing two distinct functions.

> As late as 1966, Air Force Doctrine defined Strategic Airlift as:
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> the continuous or sustained air movement of units, personnel, and material between area commands; between the Continental United States (CONUS) and overseas areas; within a command when directed....

and defined Tactical Airlift forces as those:

> organized, equipped, and trained to move combat forces and sustaining material under widely varied situations ranging from small movements in battle to large movements over long distances.

These definitions were very vague and reinforced the paradigms of inter and intratheater airlift proponents.[51] However following the experiences of the "dual" airlift systems that existed in Vietnam, and the conclusions of the Corona Harvest studies,[52] the DOD

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[48] Owen, Chapter 5, pp 45-68.

[49] Robert Frank Futrell, *Volume II Ideas, Concepts Doctrine: Basic Thinking in the United States Air Force 1961-1984* (Maxwell AFB AL.: Air Univ Press., 1989), 625.

[50] ibid.

[51] Jeffery S. Underwood, *Military Airlift Comes of Age: Consolidation of Strategic and Tactical Airlift Forces Under the Military Airlift Command, 1974-1977* (Scott AFB IL.: Office of MAC History, 1989), 2.

[52] During the Vietnam War, the Air Force systematically gathered information about air operations to facilitate the formation of doctrine for the future. From 1965 to 1968 a team from the Tactical Airlift Center prepared a four-volume study of various aspects of

decided to streamline the military airlift establishment. On 29 July 1974, Secretary of Defense James R. Schlesinger issued a program decision memorandum (PDM) which directed sweeping changes for the organization of the Nation's Military Airlift System. "Explaining it as part of a DOD effort to promote Service interdependence, The Office of the Secretary of Defense (OSD) directed the Air Force to consolidate all DOD airlift forces under a single manager by the end of fiscal year (FY) 1977." Secretary Scheslinger's memorandum went on to direct the Air Force to consolidate their "Strategic" and "Tactical" airlift operations under MAC by FY1976, and that MAC would be designated as a Specified Command for Airlift. [53] Air Force Chief of Staff, General David C. Jones gave the following rationale for the Secretary's Decision:

> "To achieve better integration of overall airlift, strategic and tactical airlift assets will be consolidated under MAC.... All Air Force tactical airlift C-130 aircraft and associated support in TAC, AAC (Alaskan Air Command), USAFSO (United States Air Forces Southern Command), USAFE, (United States Air Forces in Europe), and PACAF (Pacific Air Forces will be transferred to MAC."

The initial step in implementation occurred on 1 December 1974 when TAC transferred all its tactical airlift units to MAC.[54]

By spring 1976 the consolidation was complete and the Pentagon was in favor of granting MAC its Specified Command status as recommended in the 1974 SECDEF PDM. Secretary William P. Clements, Jr., endorsed the designation for the following reasons:

> "Under this command structure, the JCS will include the MAC staff in planning for JCS exercises and for war, will direct the allocation of resources, prioritize competing movement requirements and direct MAC during deployments, exercises, or as necessary in periods of crisis to insure operational support of unified commands."[55]

As coordination and support questions were agreed upon and solidified between MAC and the theater commanders, the United States at last possessed an airlift system

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wartime airlift operations which was subsequently condensed in to a single volume report, "*The Lindsay Committee Report.*"

[53] Underwood, 9-10.

[54] *Anything, Anytime, Anywhere*, 164.

structured to maximize efficiencies. As it became clearer that the only aspect of intratheater airlift that made it functionally distinct was the airplanes used. The idea to consolidate all the airlift forces to reduce redundancies and increase flexibility became more compelling. Moreover, the organizational design that resulted from the consolidation was better able to ensure the programming necessary to provide the nation the ability to project power around the globe.

## McPeak's Restructuring

If one considers the consolidation activities of the 1970s as the high-point of the organizational design of the National Airlift System, then the restructuring of Air Force Chief of Staff, General Merrill A. McPeak, in 1992, could be considered the low. Even with the Air Force's success in Desert Storm fresh in the service's collective mind, General McPeak in a USAF White Paper, "Air Force Restructure," sought to reorganize the service for what he called the regionally-based threats of the post-Cold War period. The reorganized force would be better aligned to support the strategy of "Global Reach - Global Power." General McPeak was afraid that the distinction between strategic and tactical had been blurred and the creation of functional commands had adversely affected the division of labor in the theater commands. He thought the "functionality" orientation was directly contrary to the foundational basis established by the AAF in World War II, and it was time to realign our organizational design.

What did this mean to the National Airlift System that had performed so admirably in Desert Storm? For starters, all overseas C-130 airlift units were to be reassigned to USAFE and PACAF as applicable and the two airlift divisions serving the theater commanders were disbanded. General McPeak's overarching idea was to give the warfighting CINCs control of the theater assets required to fight in order to apply air power as a unified whole within their areas of responsibility.[56] The move took General Hansford T. Johnson, CINCUSTRANSCOM and MAC Commander, completely by

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[55] ibid, 166.

[56] Background Paper, Ms. Betty R. Kennedy, Evolution of Roles and Missions Authorities Vested in AMC/USTRANSCOM, 1941-1997, 27 February 1997.

surprise. In his oral history, General Johnson recalled that General McPeak "wanted to take all the C-130s and give them to Air Combat Command and the overseas commands. I was successful in convincing him not to do that." As CINCTRANS, General Johnson discussed a concern that as a result of this reorganization the Air Force would have six major organizations that operated airlift assets: AMC (formerly MAC), ACC, USAFE, PACAF, the Air Force Reserve, and the Air National Guard. He stated that the "charter in Air Mobility Command has given us the right to write the regulations, to manage the fleet, and so forth. If one of those six commands chooses to go their own way, then we will not have a unified effort in mobility."[57] General Johnson's concerns would not be lost, but as of 1 April 1992 in accordance with SECDEF Richard B. Cheney's PDM affecting the ownership of "service-unique and theater assigned transportation assets," overseas C-130 aircraft transferred to the theater component commanders and the respective airlift divisions were inactivated. The reorganization ended the single ownership of the Airlift System by MAC[58] and was compounded when the CONUS-based C-130s were transferred from Air Mobility Command to Air Combat Command on 1 October 1993.[59]

## Ghosts of the Past

Desert Storm seemed to have proven the ideas General Arnold communicated to General Spaatz and the efforts of Kuter, Tunner, and Estes. For a man as dedicated to tradition as General McPeak, some can argue that he somehow failed to heed the lesson learned from past airlift operations and the benefits of centralized control. General

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[57] An Oral History, General Hansford T. Johnson, Commander in Chief United States Transportation Command and Air Mobility Command, (Scott AFB, IL.: Office of History, 1992), 52, 62.

[58] Robert deV. Brunkow, *Toward the Air Mobility Command: A Chronology of Tanker and Airlift Events*, (Scott AFB, IL.: Air Mobility Command Office of History, 1994), 55.

[59] On 1 June 1993 the reorganization efforts of the CSAF General Merrill McPeak resulted in MAC being renamed Air Mobility Command (AMC), and TAC being redesignated Air Combat Command (ACC). Strategic Air Command was deactivated and its CONUS tanker assets were consumed by AMC and overseas refuelers became the property of the respective theater component commanders. Likewise, SAC's bomber were absorbed into the force structure of ACC.

McPeak was replaced as CSAF in October 1994 by General Ronald R. Fogleman. Prior to becoming the Chief, General Fogleman was CINCTRANS and Commander, Air Mobility Command. He was familiar with airlift and its position as a key link in the nation's power projection capability. He appreciated the importance of airlift in the execution of "Global Reach" to ensure "Global Power." Coupled with airlift events surrounding Operation Joint Endeavor,[60] one could predict the actions taken by the new Chief of Staff. To get an idea of the confusion that existed between command and control of strategic and theater lift assets it is beneficial to read an accounting of an event by General Robert L. Rutherford, CINC United States Transportation Command (TRANSCOM):

> "During the early stages of the deployment to Bosnia-Herzegovina, USAFE started to experience maintenance problems with their C-130s. USAFE asked European Command (EUCOM) to request additional C-130 augmentation. EUCOM made the request to the Joint Chiefs of Staff (JCS), who tasked the force provider, United States Atlantic Command (USACOM). ACOM came to TRANSCOM, who tasked ACC to provide the assets. By the time the additional C-130s arrived in theater, TRANSCOM's strategic lift had cleared out the theater backlog, so USAFE released the C-130s back to ACC without anyone in the joint command being notified or consulted. If TRANSCOM controlled the C-130s, none of this would have been necessary."[61]

General Rutherford's biggest concern was the handling of the mix between strategic and theater airlift forces. He had serious reservations regarding the theater component's ability to support the "normal day-to-day tactical C-130 airlift operation, much less a mix of strategic and tactical airlift during a contingency." General Rutherford's concerns not only involved resource allocation, but operational issues too. As a past Commander of PACAF, he had a good knowledge of the theater's capabilities and requirements. The theater components simply did not have the airlift expertise contained within USTRANSCOM and its component, AMC. "They don't have senior leadership familiar

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[60] Operation Joint Endeavor was in support of the United Nation's peacekeeping efforts in Bosnia.

[61] An Oral History, General Robert L. Rutherford, Commander in Chief United States Transportation Command and Commander Air Mobility Command, (Scott AFB, IL.: Office of History, 1996), 50.

with the nuances of lift." When asked about single ownership of airlift, including C-130s, General Rutherford replied,

> "The bottom line is that it would sure simplify the process, and I think the Air Force and the joint community need to move in that direction. To come to that conclusion, I've drawn from my theater experience as well as my experiences as AMC commander and CINCTRANS."[62]

Consequently, based on General Rutherford's call for a mini-summit on the C-130 ownership issue and the seamlessness of single management of airlift forces, the subjects were discussed at the Fall 1996 Corona Conference. As a result of these discussions, and what may be interpreted as a compromise, the CSAF directed the reassignment of CONUS based C-130 assets to AMC effective 1 April 1997.

[62] ibid, 48.

# Chapter 3

# Decision-Making Models

*"Airlift is the mission. A theater is merely the location where it is accomplished."*[63]

The organizational design of a service or command can have a tremendous impact on its potential operational success or failure. Dynamic environments can affect how an organizational scheme that fosters success today may not be adequate for success in the future. Additionally, when considering military missions and capabilities such as airlift, variables affecting operational elements such as technology, information, and measures of merit must be evaluated and their impact entered into the design equation on a continual basis. The ultimate purpose of the organization should be the central consideration when determining its design. Lack of constant attention to the organization's primary purpose and negligence towards its long-term enhancement, may result in a structure that emphasizes peripheral functions and impedes the accomplishment of fundamental objectives.

Optimum organizational design is rarely black and white, and there is a constant struggle between effectiveness and efficiencies. Weighted factors representing the priorities we place on either effectiveness or efficiencies are normally in fluctuation dependent upon "which side of the fence" you are standing. Military establishments are constantly adapting to new imperatives and find themselves at the mercy of more than

[63] Lieutenant Colonel Chris J. Krisinger, "Towards a Seamless Mobility System: the C-130 and Air Force Reorganization," *Air Power Journal*, Fall 1995, 36.

one influential, though sometimes parochial, interest and must be poised to react to various economic, bureaucratic and political pressures.[64]

In light of these design and operational constraints, the issue of developing a truly "seamless" airlift system can and should be evaluated according to decision-making tendencies that are likely to result from different organizational structures. The controversy concerning the integration of airlift resources has traditionally centered around command and control of resources. But, of equal or possibly more importance, are the decisions that can be expected from different organizational designs associated with those resources. The interacting processes characteristic of single versus multiple ownership may prove to be enlightening and invaluable in force structure alignment decisions. Additionally, the organizational design and decisions effecting a national asset should be expected to directly affect operational capabilities across the myriad of possible contingencies.

Graham T. Allison in *Essence of Decision*, offers three decision-making models that when used to evaluate different organizational designs can provide a framework to explain why certain decisions may have been made and can also be used somewhat as a predictor of decisions one could anticipate. Allison's models can be useful in thinking through how organizations may approach problems or propose solutions.[65] No one model is more correct than the next; the appropriate model depends as much upon the question being asked, as on the phenomena about which it is being asked. Being able to anticipate tendencies in decision-making will allow for further expectations concerning how specific organizational operations will be planned and executed. The decision-making models Allison describes are commonly referred to as: Model I (The Rational Actor Model), Model II (The Organizational Process Model), and Model III (The Governmental Politics Model). By understanding the model's specifics, coupled with understanding the ultimate purpose of the organization, a design structure should optimize the blend of effectiveness and efficiency.

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[64] Air Force Manual 1-1, *Basic Aerospace Doctrine of the United States Air Force*, vol. 2, March 1992, 229-230.

[65] School of Advanced Air Power Studies Course 601 Syllabus, *Decision Making: A Primer for Strategist*, Academic Year 1996-1997, 3.

## Model I, The Rational Actor

The Rational Actor Model is considered by many as the simplest method of decision-making to understand because it is easy to personalize and relate to in everyday decision-making situations. Model I assumes an action is dependent upon a unitary rational actor that has centralized decision-making and has complete information to insure he has value-maximized his opportunities. The model assumes actors will use reason and consistency in making decisions and a definable and defensible calculation.

The basic concepts of rational action are formalized by the following categories:

1. Goals and Objectives. The rational actor has a specific or a set of objectives that it wants to pursue and uses well developed possible courses of action (COAs) designed to achieve them. Additionally, the rational actor will utilize these COAs to eventually judge the desired objectives against "utility" or "payoff" maximization.

2. Alternatives. The rational actor must then choose from the sets of alternatives applicable to a situation. For example, an actor can review the alternatives as part of a decision tree to display ramifications associated with particular options and to sufficiently differentiate one alternative from another.

3. Consequences. Each alternative has a set of expected outcomes that will occur if that particular course of action is selected. Variations are generated by making different assumptions about influencing variables and the decision maker's knowledge of expected results that follow from the choice of each alternative.

4. Choice. The rational choice consists of selecting the alternative in which the corresponding consequences are ranked highest in the actor's payoff function. [66]

As a result of decision-making using these four actions, the actor is somewhat predictable. We can expect the decision made by the actor can be explained by and

[66] Allison, 29-30.

support the values he chooses to maximize, and the actor is consistent throughout the process or "rational."

Maximizing a value is good of course, but in and of itself it does not lend itself towards a bias of effectiveness or efficiency--it is decision maker dependent. Additionally, Model I has other limitations:

> 1. Time. The model only looks at a single, independent time-period orientation, and if under a constraint, it may not allow for the consideration of long-term implications. It sometimes can lead to an emphasis for an immediate solution as opposed to a well thought out methodical decision and one might get inconsistent actions
> 2. The rational actor model assumes perfect knowledge.
> 3. The model does not take into consideration probabilities associated with uncertainty and the influence of the actor's or other player's involved propensity for risk.
> 4. There is no allowance for strategic interaction among opposing players. All moves are static.
> 5. Decision makers analyze other actors through "mirror imaging," i.e., imposing self values and actions upon the expected behavior of an opponent.[67]

The simplification of the Rational Actor model conceals the fact that an organization consists of a conglomerate of semi-independent directorates, each with a substantial life of its own. The organizational leader may sit in the formal decision maker position on top of the typical "wiring diagram," but the organization itself operates as a result of directorate activity. An insidious and potentially dangerous situation could arise if the quasi-independent subsidiaries are emphasizing self-serving interests via Model I versus the overarching or "Grand Strategy" of the parent organization. The organization defines alternatives and estimated consequences as their components enact routine processes or Model I behavior. Organizational behavior, therefore, can be understood

[67] Notes, School of Advanced Air Power Studies Course 601, *Decision Making: A Primer for Strategist*, 17 July 1997.

according to a second conceptual model, less as deliberate choices and more as outputs of large directorates functioning according to standard patterns of behavior.[68]

## Model II, The Organizational Process

Unlike the unitary actor basis of Model I, Model II is founded upon the idea that coordination is key. Activity with the organizational process is broken up via divisions of labor between directorates with primary responsibility for particular tasks assigned to subject matter experts. Rarely do important issues fall exclusively within the domain of a single directorate, and the organization's operational behavior reflects the independent output of several divisions adhering to standard operating procedures (SOPs). In such an operation, the organizational leader can, at best, disturb the behavior of the organization, but not control it. The organization operates as a result of established programs, routines, and tendencies. The basic thrust of the organization is a process of planning, organizing, command, and control.[69]

Graham Allison points out that the foundational work supporting Model II was done by Herbert Simon. Contrary to the attributes of Model I, Simon argues that there are limits affecting human problem solving ability and the subsequent rational choice. Simon refers to this as bounded rationality, that is, "the physical and psychological limits of man's capacity as alternative generator, information processor, and problem-solver constrain the decision-making processes of individuals and organizations."[70] Limitations of time, resources, and complexity of problems force us to simplify and coordinate actions. People work through their branches, divisions, directorates, and parallel organizational structures. As a result, important decisions will need to have the stamp of many divisions. The Model II approach to decision-making is very decentralized and often reflects a "cookbook" approach as outcomes have a tendency to be very simple and predictable. However, as may be predicted, problems can develop if a situation does not lend itself to SOPs. If a critical decision must be made within strict time constraints, the

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[68] Allison, 67.

[69] Notes, School of Advanced Air Power Studies Course 601, *Decision Making: A Primer for Strategist*, 18 July 1997.

resultant solution may only satisfice (i.e., satisfy versus maximize) the organizational needs as opposed to maximizing a particular value. Since the organization would tend to use "canned solutions," satisficing is synonymous with obtaining a "good enough" answer.

An organizational design that lends itself to the Model II process of conducting operations takes advantage of focusing on the entire group, relying on rules and routines, spreading the work among experts to make the hard seem simple, and providing more stability through less uncertainty in decisions. However, there are drawbacks and hidden traps to this design for decisionmaking.

The routines, rules, and SOPs of Model II can be traps in and of themselves. These processes and their resultant decisions can be corrupted without being exposed until it is too late. Since most routines and SOPs are based on historical precedence and repeated practices, actions may be taken that are irrelevant or incorrect based on new information that has not been interjected into the organizational norms. In a Model II type process, it should be expected that the decisions will occur less as deliberate actions, and more "machine-like." The process of coordination and support necessary can result in cloudy or vague decisions as a result of parochial priorities and perceptions, and at times the process renders no decisions at all. The model is difficult to apply to unknown complex situations and is not supportive of changing situations.

Models II's grasp of organizational action as output partially coordinated by a unified group of directors, balances Model I's efforts to understand organizational behavior as choices of a unitary actor. However, Model II analysis should not be allowed to disregard a further level of discussion concerning decisionmaking.

## Model III, Governmental Politics

Under the Governmental Politics Model of decision-making, the directors who sit on top of the organizational hierarchy are not a monolithic group. Rather each individual that makes up this inner circle is an independent actor in a central competitive game of politics. Adhering to the axiom of "I'll scratch your back, if you scratch mine,"

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[70] Allison, 71.

bargaining among the recognized figures for self interests or promotions can be the norm. The behavior of the organization can be understood according to this third model, not as organizational outputs, but as the results of these bargaining games. Unlike Model I, the Governmental Politics Model has no unitary actor attempting value-maximization, rather it is made up of many players focusing on diverse intra-organizational problems. These actors do not necessarily adhere to a consistent set of strategic objectives, but rather according to various agendas and goals. Decisions are not made by a single, rational choice, but by the "pulling and hauling" that dominate politics.[71] Like Model II however, information is compartmentalized and valuable, though many times not complete, and rational objectivity gives way to serving individual goals, interests, stakes and political positioning. Players not only speak for themselves, but represent a constituency latent with parochial priorities and interests. Uncertainty is the order of the day, with deadlines, power, coalitions, and "logrolling" having an enormous impact on the routine action channels involved in decision-making. Additionally, the measurements of merit that are applied to the numerous actors involved in such an environment can be diametrical to the long-range priorities of the organization. When analyzing a decision made through Model III, the cliché "where you stand depends on where you sit," can tell you much about the variables surrounding a decision. Bureaucracy colors the way a decision is made via the routine action channels required to be negotiated before any action can be taken. "Thus the character of emerging issues and the pace at which the game is played converge to yield 'decisions' and 'actions' as collages."[72]

## Design Impacts on a Military Airlift System

Though Model I may lend itself to an organizational design emphasizing centralization and single-ownership of airlift resources, it may not be the best fit for all situations. As encompassing as our Military Airlift System is, it would be impossible for any director to single-handedly orchestrate the numerous aspects of its operation. However, Model I's relatively clean process of decision-making could be exactly what is

[71] ibid, 144.
[72] ibid, 145.

necessary in times of limited resources, competing demands, and directed maximization of efficiency. Arguably, these descriptive attributes frame a peacetime operations picture, but by blending efficiencies where available, with effectiveness where required, the Model can be applied in a wartime scenario especially given limited resources and competing demands.

While Model I may be "clean" as far as decision-making is concerned, the impact of Model II can be complementary when applied by any functional service organization like airlift. In routine operations, the recognition of subject matter experts can lead to recurring expected rational decisions. If an unknown is encountered, slight adaptation of organizational cultural norms and procedures can result in an adaptive decision-making architecture. This infrastructure should then be equipped to develop courses of action supported by key players, reached through committee processes, that would ensure the best interests of the organization, its customers, and all other applicable parties are considered and balanced in reaching a decision.

Although Models I and II can be orchestrated to develop complementary benefits, the underlying assumptions of Model III type organization, namely, (1) directorates not having common goals, (2) leaders in control of the bureaucracy, and (3) directorates having informational advantages in certain areas, are not conducive to command operations. However, this model must be understood and its implications appreciated, when preparing to advocate for airlift requirements in the overall service arena.

Since our airlift system must be designed to respond to countless national interests, strategies, and objectives, in time critical situations, its design must be such that an integrated tool is produced capable of meeting a myriad of challenges, yet deal with the routine. The design must wrap around world-wide operations to ensure effectiveness and efficiencies that are responsive to the nation's global requirements. In order to begin to offer any type of guarantee that our airlift system can meet these monumental expectations, a combination of Model I and II designs may be the proper structure to build upon. By taking the best of the two models we should produce a design that capitalizes both on emphasizing efficiencies via the maximization of specific values dependent on situation and availability of resources, while increasing effectiveness

through established SOPs and a day-to-day operating infrastructure that would be crisis-action capable.

# Chapter 4

# Airlift Organizational Designs During Conflict

> *"Current organizational arrangements enhance combat capability by exploiting commonalties between theater and strategic airlift forces. The integrity of the global airlift system depends on the synergistic effect of this integrated airlift operation."*[73]

When deciding upon an organization's design, the banners of efficiencies versus effectiveness are often waved by proponents to rally support or opposition to a particular structure. However, the views of the debaters need not be polarized. By integrating the best from both structures, organizations can yield focused quality results. The purpose of this chapter is to look at two snapshots of airlift's organizational design. The first, is reflective of a conglomerate of airlift providers as was the situation during Vietnam and the second, an example of single source responsibility for "Service-type" functions for airlift (i.e., MAC, in Desert Storm). By reviewing selected airlift lessons learned from the Vietnam conflict and Operation Desert Shield/Storm, we may see how they can be somewhat predicted by relating the organizational design to the Allison decision-making models. By doing so, one may evaluate the relationship between design and subsequent operating activities, and thereby obtaining some degree of confidence in achieving desired expectations.

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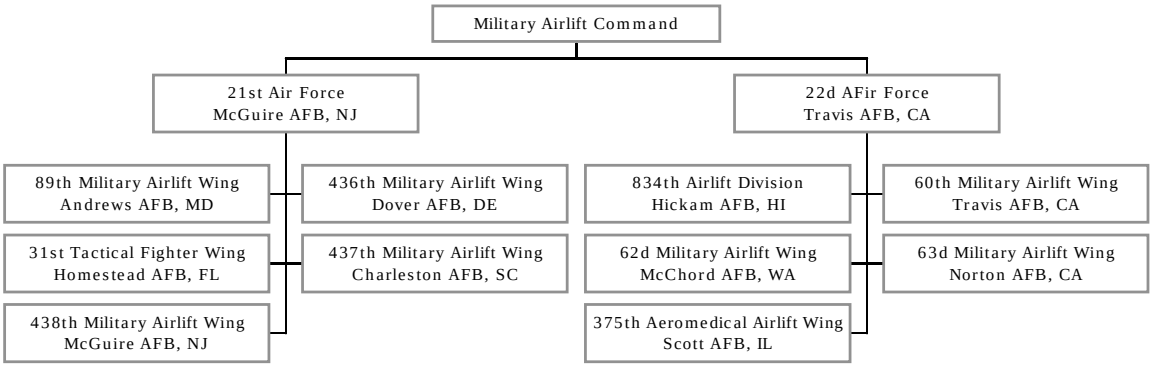
[73] Major General James C. McCombs, Deputy Chief of Staff, Plans and Programs, Military Airlift Command, memorandum to General Hansford T. Johnson, CINCMAC, subject: "Why is there air?" White Paper, "*A Seamless Airlift System,*" 18 July 1991, 1.

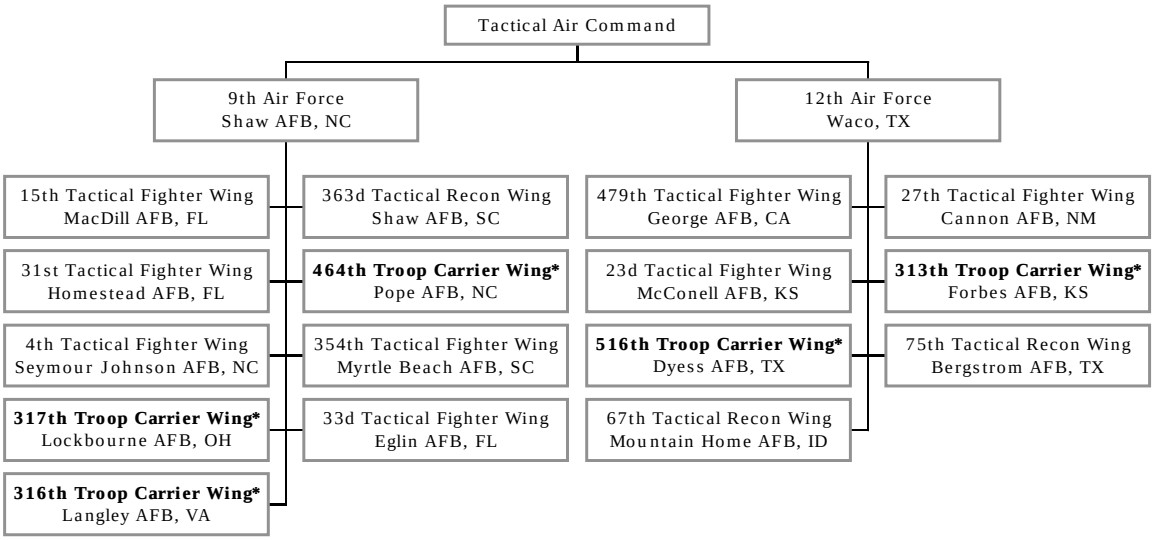
# Vietnam

The decade-long Vietnam war provides a great example about how airlift activities directly impacted the design of a subsequent system that recognized the importance of effectiveness, while instituting a demand for efficiencies. Figures 1 - 4 illustrate the organizational designs of Air Force Commands that included airlift assets during 1966 and had some impact on activities in Southeast Asia (SEA).




This Chart developed from information contained within the September 1966 *Air Force/Space Digest* Magazine, p. 169, and *Anything, Anywhere, Anytime: An Illustrated History of the Military Airlift Command, 1941-1991*, pp. 250-264.

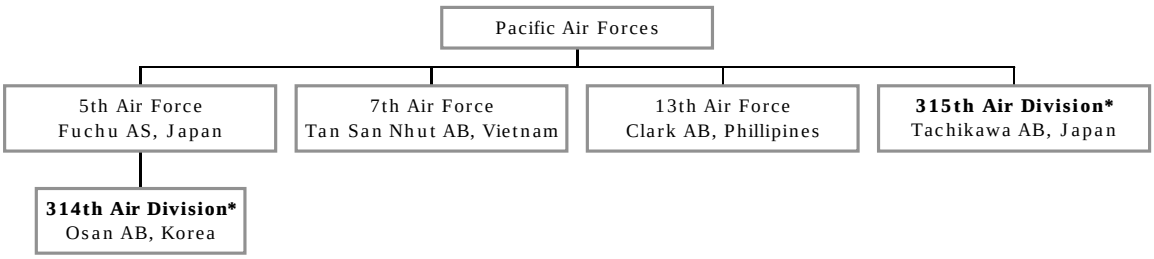
Figure 1. Organizational Design of Military Airlift Command 1966 (Abbreviated)




This Chart developed from information contained within the September 1966 *Air Force/Space Digest* Magazine, p. 141.

* denotes airlift units.

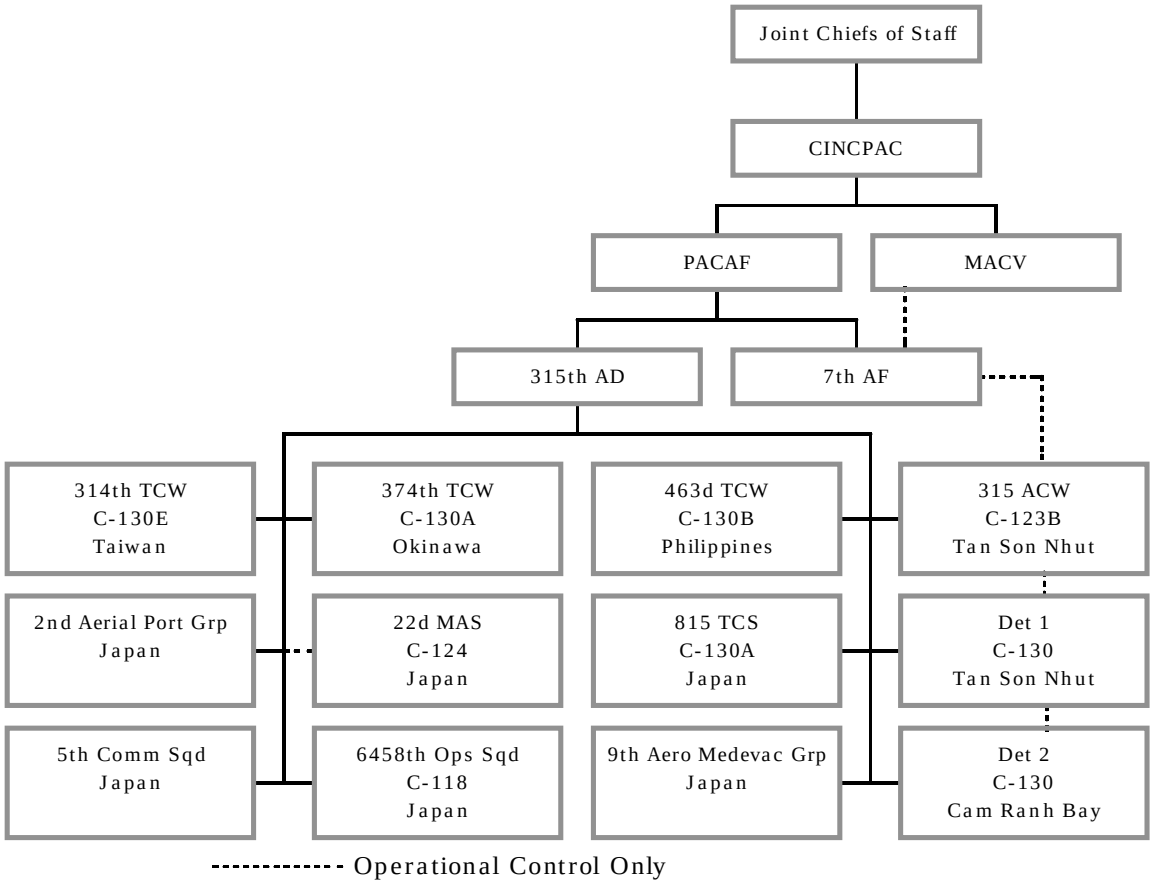
Figure 2. Organizational Design of Tactical Air Command 1966 (Abbreviated)




This Chart developed from information contained within the September 1966 *Air Force/Space Digest* Magazine, p. 95.

* denotes airlift units.

Figure 3. Organizational Design of Pacific Air Forces 1966 (Abbreviated)




This Chart developed from information contained within the Project CHECO Southeast Asia Report, *Tactical Airlift Operations*, Figure 1 (follows page 2).

Figure 4. Organizational Design of Airlift in Southeast Asia 1966 (Abbreviated)

Upon reviewing the organizational structures and understanding the coordinating activities necessary for the execution of any operation, let alone the conflict in Vietnam, it

becomes readily apparent that decision-making regarding an overall airlift view would be reflective of Allison's Model II and III. The organizational design of airlift forces made coordination paramount to mission accomplishment.[74] The mission scheduling activities were broken up between intratheater and intertheater operations, and both operations had overlap in infrastructure capabilities and requirements that nurtured bureaucratic self interests and agendas. This can be substantiated by the reported lessons learned during Vietnam as documented by Colonel Louis P. Lindsay's committee reviewing airlift operations in SEA in support of Corona Harvest.[75] Through personal accounts, unit histories, and submissions by the commands involved in SEA activities, the Lindsay Committee identified aspects of airlift operations from doctrine concerns to the need for a follow-on Tactical Airlift Aircraft as areas that were in need of adjustment when it came to the dynamics of decision-making.[76] Although the actual number of major lessons learned addressed by Colonel Lindsay's committee totaled 28, the essence of his summary can be appreciated by presenting four lessons that touch on doctrinal issues, organizational alignment, infrastructure and resource deficiencies, and equipment requirements--basically encompassing the general aspects of the remaining findings. The process used in reviewing the lessons learned, and subsequently associating a decision-making model with the activities that transpired, will focus on the prevalence of the three traditional characteristics of the models: value maximization, implementation of SOPs, and the manipulation of bureaucratic politics.

## Lessons Learned and Possible Explanatory Allison Models with Rational

1. Command and Control Limitations: Doctrine did not adequately address airlift command and control issues. The airlift mission was hampered by a lack of adequate

[74] Major General Burl W. McLaughlin, "Tactical Airlift, November 1967-June 1969," 834th AD/CC End of Tour Report, 6-2 - 6-25.
[75] "USAF Airlift Activities in Support of Operations in Southeast Asia, 1 January 1965 - 31 March 1968, Project Corona Harvest Study Final Report, Air University, Maxwell AFB, AL, January 1973.
[76] ibid, 2-45.

communications and the absence of an in-being airlift organization to ensure proper management of the airlift force.[77]

Model - Model II. Published doctrines in 1966 provided that the Air Force Component Commander control all mission aircraft through the Tactical Air Control Center. However, due to the uniqueness of airlift requirements, both strategic and tactical, and the shortage of manpower, expertise, and an airlift workload larger than expected, a separate airlift dedicated facility and communication network was required.[78] When an organization is accustomed to following established routines and SOPs, leadership should expect the problems exemplified by this case. Limitations of time, resources, and the complexity of controlling the airlift mission were not properly planned for and were outside the normal operating procedures for a control center oriented towards handling fighter aircraft and missions.

2. Need for Single Organization for Airlift: The organizational posture of both strategic and tactical airlift forces resulted in extensive parallelism in their basic functions, such as aerial ports, command and control elements, and elementary support functions. This duplication detracted from efficiency and tended to complicate the mission.[79]

Model - Model III. Mission statements of strategic and tactical airlift forces are vague, obscure, and ill-defined regarding responsibilities, and both direct mutual augmentation. Duplication of efforts occurred in some support functions, resulting in two airlift forces operating within and between an area command. The model III organizational design tends to foster competition, ignoring rational objectivity in favor of serving individual goals. Jockeying for beneficial positioning to achieve parochial interests can definitely be opposed to the overall priorities of the supported cause. This is demonstrated on a regular basis in Congress. Legislators attach special interest programs to bills that have no direct relationship and in the end this baggage may in fact kill the legitimate proposal.

3. Need for Increased Resource Requirements: Sufficient personnel in numerous areas including aircrew, maintenance, and aerial port plus other necessary resources to include basic facilities, were not available to MAC or TAC in support of the airlift systems as

[77] ibid, 3.
[78] McLaughlin, 6-23.

requirements increased to support the escalating conflict. Overworked personnel resulted in low morale, decreased retention, and critically handicapped effectiveness.[80]

Models - Models II and III. In tune with Model II "machine-like" decision-making, the infrastructure required to support the airlift system was not prepared for the increased productivity necessary to meet demands. General William W. Momyer, as 7th Air Force Commander in Vietnam, pointed out in his end of tour report that when he assumed command "there was no organization for the control and direction of the airlift force, yet daily airlift requirement was going up."[81] The system was unable to adjust quickly as it suffered from organizational inertia. Vietnam was an unknown complex situation that did not fit into the standard norms associated with the force postured in accordance with the National Security Strategy schema of massive retaliation. Additionally, when organizational controls are not in-place, decisions are less reflective of a rational actor, and become beset by "pulling and hauling" political practices that focus on diverse intra-organizational problems and goals. For example, in the case of a tactical control center, if the controllers are accustomed to handling fighter-type missions, they may not grasp unique aspects or requirements of airlift operations and this ignorance could translate to misdiagnosis of problems and in the end, result in failure to attain a desired goal dependent upon mutual mission execution.

4. Requirement for a Family of Follow-on STOL Aircraft: The increased maintenance requirements resulting from extensive ops tempo and battle damage as well as the austere operating locations of Vietnam clearly identified a follow-on aircraft requirement to replace the rapidly aging tactical airlift fleet. The follow-on requirement identified an aircraft similar to the capabilities offered by the C-130, but additionally sought a smaller aircraft to handle individualized or "feeder" airlift requirements.[82]

Model - Model I. In the process of identifying this deficiency the players involved seemed to have proceeded in a manner characteristic of a rational actor. They took the

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[79] Final Report, 4a.
[80] ibid, 6.
[81] General William W. Momyer, "Observations of the Vietnam War, July 1966-July 1968," End of Tour Report, November 1970, 10.
[82] Final Report, 36.

information gained through experience and documented results involving the nature of the Vietnam conflict and the tactics used, supported by actual maintenance data, and determined a deficiency existed that was limiting operational efficiency. The actors seem to have used reason and consistency in reaching this decision with definable and defensible calculations.[83] The real test of this effort to maximize efficiency would come as the weapon system requirement would enter the wickets of the Model II dominated Air Staff and the influences of the Model III practicing bureaucratic entities such as the affected major commands, HQ USAF, CINCs, and Congress. In this case the recommendation never came to fruition.

**Aftermath**

As a result of operations in Vietnam, the Corona Harvest studies of the war reported two relevant lessons. First, tactical airlift needed a single home command that would address the uniqueness of its mission and focus on providing the nation with a force structure and all the necessary support infrastructure that was capable of meeting the requirement.[84] Major General McLaughlin, 834th Air Division Commander, echoed this when he wrote, "If we are to continue to be truly responsive, tactical airlift must receive assured priority as a major weapon system."[85] Second, that regardless of the organizational design of the Air Force's Airlift System, commanders must recognize and reduce the wasteful inefficient practices of duplication of effort and facilities in a theater of operations.[86] These findings and the organizational theory that airlift resources must be controlled from one central point were considered in the 1974 consolidation of strategic and tactical airlift into MAC directed by Secretary of Defense (SECDEF) James R. Schlesinger. As a visiting research fellow at the Airpower Research Institute in 1983,

[83] Brigadier General William G. Moore, Jr., "Tactical Airlift, November 1967-June 1969," 834th AD/CC End of Tour Report, 54-55.
[84] Lieutenant Colonel Richard T. Devereaux, *Theater Airlift Management and Control: Should We Turn Back the Clock to be Ready for Tomorrow?* (Maxwell AFB, AL.: Air Univ Press, 1993), 16-17.
[85] McLaughlin, 10-6.
[86] Devereaux, 16-17.

Lieutenant Colonel Charles E. Miller summed up his perspective of the organizational design effects of the lessons learned in Vietnam in *Airlift Doctrine* as follows:

> "Ultimately, the Vietnam era illustrated that tactical and strategic airlift forces should be consolidated into one force, which officially occurred in 1976. Two kinds of efficiency supported their decision. More important was the point, argued for 20-odd years, that by putting two forces under one organization there would be a synergistic effect that would yield more airlift responsiveness than the simple sum of the two capabilities. The other, a peacetime economies argument, said that dollars and manpower would be saved."[87]

However, all did not agree with Lieutenant Colonel Miller's assessment. General Momyer, as Commander of Tactical Air Command believed "strongly that removal of the tactical transport from TAC and the overseas commands would diminish the "tactical" orientation of the force."[88]

> "There is one major lesson which stands out above all others with regard to airlift and that is that tactical airlift is distinctly different than strategic airlift. It operates in an environment which demands association and integration with other tactical forces and it must be directed and controlled by the theater air commander as are other forces under his jurisdiction. Whereas the strategic airlift task can, in an ultimate sense, be handled by a commercial carrier, the theater airlift task is rooted in combat which requires emphasis on entirely different factors such as short, relatively unprepared fields, exposure to ground fire, coordination with escorting fighters, and integration into the tactical control system for direction, assistance and redirection."[89]

General Momyer contended that "all the experiences and facts which have emerged from the Vietnam war again point to the validity of the separate entities of strategic and tactical airlift. . . . Theater war demands the assignment of tactical forces which had been designed, nurtured and led by commands devoted to this highly specialized form of warfare."[90]

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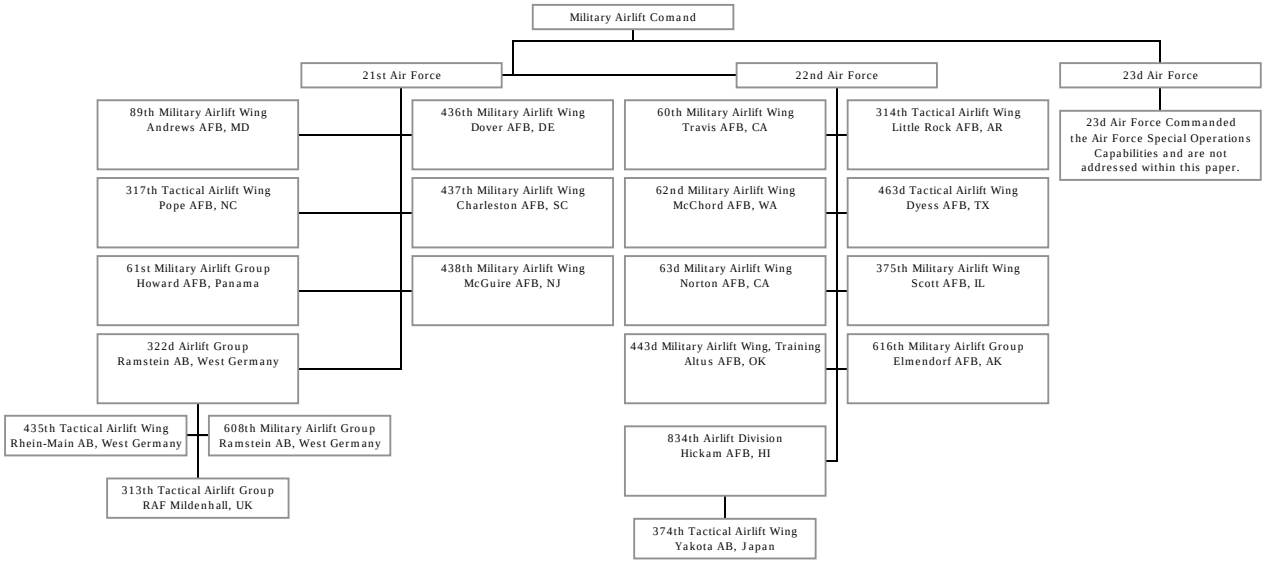
[87] Lieutenant Colonel Charles E. Miller, *Airlift Doctrine* (Maxwell AFB, AL.: Air Univ Press, 1988), 422.
[88] Ray L. Bowers, *Tactical Airlift* (Washington D.C.: Office of Air Force History, 1983), 650.
[89] Momyer, 12.
[90] ibid, 12-13.

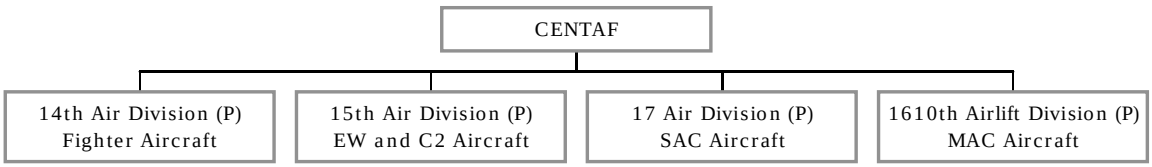
## Desert Storm

Twenty years after the concluding days of the Vietnam War and the consolidation of airlift forces under a single manager responsible for the organize, train, and equip functions, Saddam Hussein's invasion of Kuwait provided MAC with an opportunity to show the effectiveness and efficiencies of the new streamlined airlift organization. Unlike the overlapping and cumbersome menagerie of organizational designs involved in airlift support for Vietnam, figures 5 through 7 represent the streamlined structure that resulted from the 1974 SECDEF proclamation. As in Vietnam, some believe the experiences of the Gulf War reaffirmed the importance of consolidating airlift operations to guard against duplication of efforts and to maintain critical flexibility in a capability crucial to the success of the overall Desert Shield/Storm operation.[91]



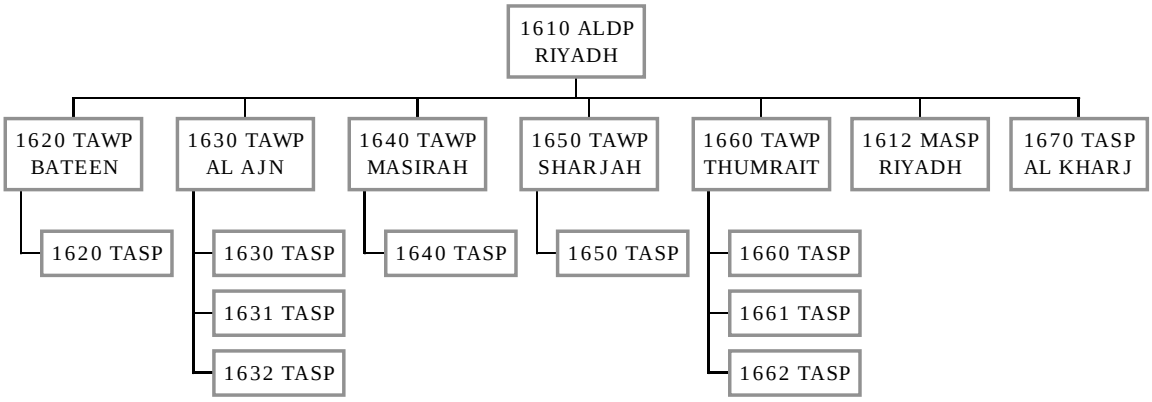

This Chart developed from information contained within the May 1990 *Air Force* Magazine, pp. 76-77.

Figure 5. Organizational Design of Airlift Forces, May 1990 (Abbreviated)



Source: RADM James A. Winnefeld and Dana J. Johnson, "Unity of Control: Joint Air Operations in the Gulf," *Joint Forces Quarterly*, Summer 1993, 93.

Figure 6. Organizational Design of U.S. Central Command Air Forces (CENTAF) for Desert Shield/Storm




Source: Dr. Eliot A. Cohen et al., *Gulf War Air Power Survey Volume III, Logistics and Support* (Washington D.C.: U.S. Govt Printing Office, 1993), 149.

Figure 7. Airlift Organization, Bases and Units (Abbreviated)

It is interesting to note that the integrity of single-manager airlift operations was maintained even when the operational control of MAC's C-130 units were "chopped" to Central Command Air Forces (CENTAF). The conduit between the Theater Commander and Commander in Chief Military Airlift Command (CINCMAC) was the Commander of Airlift Forces (COMALF). The COMALF, in Desert Storm was Brigadier General Edwin T. Tenoso, who had extensive airlift expertise, worked for the CENTAF/CC, and subsequently the Joint Force Air Component Commander (JFACC). He also served as the eyes and ears of CINCMAC--especially when it came to the command and control of strategic airlift missions handled through the airlift control center.[92] The streamlined single-manager organizational design, its responsiveness, and its emphasis on maximization of resources is congruent with Allison's Rational Actor, Model I. It is important to understand the efficiencies and effectiveness gained by Model I-like approaches to problem solving used by MAC, were a directly tied to the lessons learned via Model II and III decision-making processes from Vietnam. To substantiate this claim and attempt to draw a relationship between design and operating activities, one can

[91] Devereaux, 36-38.

review a sample of findings contained within the GAO report to the Chairman of the Senate's Armed Services Committee, *Desert Shield/Storm: Air Mobility Command's Achievements and Lessons for the* Future and MAC's real-time responses to correct deficiencies.

## GAO Findings and MAC's Model I Decision-making Results

1. Central Command's Rapidly Changing Priorities Affected Airlift Efficiency and Cargo Priorities were Inappropriately Classified: In August 1990, at the kick-off of Desert Shield, there was no fully developed operation plan nor transportation plan for this scenario. Coupled with the uncertainty regarding Iraqi intentions, USCENTCOM waffled on setting priorities for movement into the theater.[93] "One day the USCENTCOM changed its airlift priorities seven times between the 1st Fighter Wing at Langley Air Force Base, Virginia, and the 82d Airborne Division, Pope Air Force Base North Carolina."[94]

Model I Results - With no Time-Phased Force Deployment Data (TPFDD) available for the Desert Storm scenario, the need for the massive airlift to begin at maximum speed and volume (the strongest airlift benefits), was severely handicapped. "The MAC Crisis Action Team (CAT) quickly discovered that the airlift requirements being submitted through TPFDD lists by dozens of Army, Air Force, Navy and Marine Corps organizations were unreliable indicators of a unit's true airlift needs." These circumstances resulted in too much or too little airlift, or the wrong type of airlift being scheduled and tasked. True to the theme of Model I, MAC's CAT activity was geared to making a centralized decision that would value-maximize the use of lift assets. Realizing the weak link in the chain was the unreliable deployment data, a requirements validation

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[92] Brigadier General Edwin T. Tenoso, Transcript of Oral History Interview by Dr. Gary Leiser, 28 May 1992, 2, Office of the Air Mobility Command Historian, Scott AFB, IL.

[93] General Accounting Office, *DESERT SHIELD/STORM Air Mobility Command's Achievements and Lessons for the Future* (Washington D.C.: General Accounting Office, 1993), 23.

[94] Dr. John W. Leland, *Air Mobility in Operation DESERT SHIELD/STORM: An Assessment* (Scott AFB, IL.: AMC Office of History, 1993) 6.

cell was created to scrub customer requirements confirming details such as departure dates, cargo specifications, and pertinent passenger data.[95]

2. Lack of an In-Theater Recovery Base Hampered MAC Operations: Though an in-theater crew recovery base is a crucial part of MAC's war plans and necessary for establishing a total airlift system, USCENTCOM would not assign MAC a base from which to stage aircrews to fly inbound C-5s and C-141s back to European bases. USCENTCOM's decision was due to the physical space limitations in the theater of operations and the priority given to fighter, bomber, and tanker force.[96]

Model I Results - MAC recognized the absence of a stage base would complicate the efficient use of aircrews and drive up the number of flying hours accrued by its members. For safety considerations, crew members where limited to 125 flying hours in 30 days, and 330 hours in 90 days. Due to the length of the normal Desert Shield sortie, General H.T. Johnson, CINCMAC, increased these maximums to 150 and 400 hours respectively, and increased the maximum crew duty-day from 16 to 20 hours. Additionally, the MAC Deputy Commander for Operations, Major General V. J. Kondra, focused on maximizing crew availability to enhance mission efficiencies and effectiveness by instituting a practice of augmenting the basic C-5 and C-141 crews with an extra pilot. By carrying three pilots as opposed to two, the same aircrew that took an aircraft into the Gulf region could return the aircraft to a European base where it would flow into a follow-on mission to be supported by a staged crew. "Having a stage base in a distant theater became one of Desert Shield's most important lessons for air mobility. A RAND Corporation study later reported that the absence of an in-theater stage base had reduced the strategic airlift capability by 20 to 25 percent during Desert Shield/Storm."[97] It was apparent that the Services as a whole knew they relied on airlift for support, yet did not appreciate how its efficient application could tremendously influence their operations effectiveness.

3. Desert Express Flights Moved Highest Priority Cargo: As the normal airlift system became overloaded as a result of user inefficiencies and infrastructure limitations, high-

[95] ibid, 5-6.
[96] General Accounting Office Report, 29.
[97] Leland, 8.

priority items were delayed in reaching deployed units.[98] MAC recognized the problem and developed their own "over-night" delivery service.

Model I and II Results - As in any service organization, customer satisfaction is an overarching consideration that heavily influences operations at all levels. After receiving reports from some users that they were experiencing unacceptable delays in the delivery of critical spare parts, MAC initiated Operation DESERT EXPRESS. The driving force behind DESERT EXPRESS was value-maximization. In essence, this gave the customers what they wanted and served MAC's own goals and objectives. Additionally, by establishing a SOP for this specific operation, the potential problem was "nipped at the bud" before it had disastrous cascading effects on the entire system. As a Major General Kondra put it, "When you provide a service, you have to be 100 percent right every time, because people only remember the bad service. They don't remember the good."[99] DESERT EXPRESS assigned a C-141 that flew from Charleston NC to Dhahran and Riyadh daily for next day delivery of "show stopper" spare parts. The service proved so successful that when the phase II offensive build-up for Desert Storm began, and units from Europe were moved into the AOR, another Desert Express type flight was established from Germany.

**Aftermath**

Though the GAO report may not have been all inclusive when it came to lessons learned by airlift forces, when coupled with oral histories of the organizational leaders of airlift forces during Desert Shield/Storm, the Gulf War Air Power Survey, and RAND analysis it is apparent that the consolidation of airlift resulted in a system that worked to balance efficiencies and effectiveness. Single-ownership enhanced the ability to use Model I value-maximization calculations when appropriate, and still establish SOPs for day-to-day routine operating procedures and take advantage of other Model II practices. General Johnson, CINCMAC, commented that having airlifters assigned to a single command enables that manager to "better use . . . limited assets to project forces, to give true

[98] General Accounting Office Report, 26.
[99] Leland, 9.

Global Reach."[100] However, all was not so well with other aspects of the Air Force. "To some senior military leaders, the Gulf War revealed weaknesses in the organization of the Air Force."[101] The war, in fact, would prove to be the catalyst for the reorganization of the Air Force envisioned by General Merrill McPeak, and in keeping with the Secretary of the Air Force's landmark policy document, *The Air Force & National Security: Global Reach--Global Power*. General Mc Peak's ideas concerning one base, one boss, and the importance of theater commanders commanding all the assets necessary to conduct operations in their AOR, resulted in multiple commands responsible for their own airlift assets. With the tremendous successes experienced by the single-ownership concept for airlift still fresh in many minds, General McPeak seemed to ignore them and the evidence that supported the recommendations of the Lindsay Committee, when he restructured the airlift system to basically mirror that which had existed in 1966. The organizational design had come full circle. We were trading in many the benefits and lessons learned, to begin again. The success of airlift in the Persian Gulf War was many years in the making, and General Estes, CINCMAC in the mid-1960's, had espoused a proposition that was now going unheeded by proponents of this 1991 reorganization. He wrote, "global military airlift has been shown . . . to be the principal medium of achieving maximum military flexibility."[102] Estes contended that MAC had become "the key element in a far-ranging change in National policy."[103] The unique, varied, and far-reaching capabilities affected by the organizational design of airlift will continue to prove its importance into

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[100] ibid, 19.
[101] ibid.
[102] Military Airlift Command Office of History, *Anything, Anywhere, Anytime: An Illustrated History of the Military Airlift Command, 1941-1991*, (Scott AFB, IL.: Headquarters Military Airlift Command, 1991), 203.
[103] ibid.

the twenty-first century, though we may have to adjust organizationally in order to exploit them.

# Chapter 5

# Notional Alternatives for Organizational Design and Implications

*"The mission of airlift is combat airlift - the delivery of what is needed, where it is needed, when it is needed."*[104]

Given the history behind the organizational design of airlift forces, the decision-making processes associated with different organizational structures, and the expected challenges of the future for airlift forces, this chapter analyzes possible airlift force structure alignments and their implications. To do this, it is important to refocus the lens from which we have viewed airlift during this study. Throughout this thesis, the focus has been on the organizational design of organic airlift in the United States Air Force. In Chapter 1, organic airlift was defined as the airlift force composed of C-5s, C-17s, C-141s, C-130s, and their synergistic effects.

An optimal airlift organization is not a black and white issue. Ideas relating to effectiveness must also be colored by an emphasis towards efficiency. Proponents of decentralized management must be counterbalanced with the efficiencies and centralized control necessary when a resource is limited and continually in demand. The balance is not an easy one, especially when linked to the contextual variables of the times. However, a functional organization should emerge if a balance can be achieved that accounts for past experiences, and meets the needs of today and future given the fiscal, political, and military constraints and restraints. The resultant organization should

[104] Lieutenant Colonel Charles E. Miller, *Airlift Doctrine* (Maxwell AFB, AL.: Air Univ Press, 1988), 435.

capture all the advantages of efficient operations, while determining risk levels applicable to force structures capable of achieving specific levels of effectiveness.

Due to cost considerations, limited inventory and the impact on our National Strategic Policy, it is not realistic to suggest the reorganization of the C-5s and C-17s outside the purview of Air Mobility Command and the Combatant Command (COCOM)of USCINCTRANS. While a RAND study did summarize that a robust role for a squadron of C-17s could exist for operations in-theater during a two-Major Theater War scenario, the current acquisition plan does not procure the force structure necessary to operationally support any permanent assignment.[105] However, CINCTRANS may have the flexibility to offer this assistance if necessary. So, the crux of the organizational design options comes down to the distribution of C-130 forces and to how seamless we want the airlift system.

Today's organization has four Air Force major commands (i.e., AMC, AETC, PACAF, and USAFE) with authority to organize, train, and equip airlift forces. Although AMC has become the lead command for C-130 issues, the remaining commanders of the MAF are not under any obligation to abide by any direction it may provide. For the most part, as a result of the theater CINC's COCOM over his assets, he can deploy them as he sees necessary. While the current organization provides ownership to the theater CINCs, congruent with many beliefs that a warfighter should command the assets necessary to operate within his theater, from the eyes of the Defense Transportation System it has complicated the airlift equation from a customer's perspective. Additionally, the effectiveness afforded by self-ownership in the theater can be perceived as a luxury at the expense of efficiencies. "Recent experience has shown that even during relatively small operations, our ability to merge strategic and theater efforts creates a system that falls short of customer needs and expectations,"[106] and neither maximized efficiencies nor exhibited the responsiveness necessary. Major General McLaughlin in his end of tour

[105] Paul S. Killingsworth and Laura Melody, "Should C-17s Be Used to Carry In-Theater Cargo During Major Deployments?" (Santa Monica, CA.: Rand, 1997), xi-xii.
[106] Air Mobility Command White Paper, *Reviewing the Airlift System*, (Scott AFB, IL.: HQ AMC/XPDSP, 1996), 4.

report as 834th AD/CC in Vietnam foretold the importance of the deficiency identified by General Rutherford when he stated the following:

> "I have received numerous groups and individuals studying the interface of strategic airlift and our intratheater airlift, emphasizing aerial port organization, operations, capabilities, etc. But rarely have influential groups appeared to study in-depth interface at the most crucial point - the interface with the user."[107]

To examine possible solutions to any customer interface problems and better balance effectiveness with efficiency given the fiscal realities of today and the future, figures 8 through 10 offer three notional designs for review.

## Organizational Design Alternatives

The alternative designs studied here offer three ways of addressing the "seam" that exists in today's airlift system. Each has its own implications, but are all capable of transitioning from peacetime to wartime operations. The best alternative is dependent on the importance of individual MAF agendas and their persuasiveness, as compared to the overarching priorities of the Air Force. The first alternative is to maintain the status quo. While this would be easiest, coordination difficulties would likely continue and force modernization efforts could suffer. The second alternative involves making AMC the sole servicing authority for airlift, while the theater CINCs would maintain operational control (OPCON) over theater lift. The third alternative would establish USTRANSCOM as the sole provider of airlift, much like U.S. Space Command provides space support or U.S. Special Operations Command is the "belly button" for special operations capabilities. Prior to presenting the three alternative designs it may be beneficial to review this study's underlying assumptions:

1. Budgetary authorization levels at best remain as they are now.
2. Acquisition of new airlift force structure limited to 120 C-17s.
3. The C-141 retirement schedule will continue as scheduled.
4. Requirement to fight and win two simultaneous MTWs remains.

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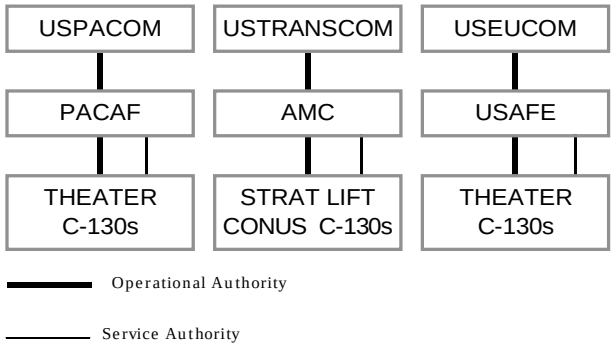
[107] Major General Burl W. McLaughlin, "Tactical Airlift, November 1967-June 1969," 834th AD/CC End of Tour Report, 10-2.

5. Warfighting CINCs tend to fund “shooter packages” first.
6. Military airlift system benefits from being seamless.
7. Industrial base not capable of an accelerated “spin-up.”

Multiple Command Ownership (Status Quo) - Alternative #1




Source: Air Mobility Command White Paper, *Reviewing the Airlift System*, (Scott AFB, IL.: AMC/XPDS, 1996), 4.

Figure 8. Multiple Command Ownership (Status Quo) - Alternative #1

This schematic represents the design that exists today. PACAF, AMC, and USAFE develop procedures and procure equipment to maintain and manage their separate assets and systems. However, as General Kross alluded in a speech to the Airlift/Tanker Association, the MAF gather annually to “hash out issues and identify inefficient processes”,[108] which in and of itself, is a relatively new initiative. As separate Air Force component commands, under figure 8, each would establish a command and control system and control the employment of assigned airlift assets. AMC in this case also serves as an airlift provider to augment the theater systems. If necessary, AMC will deploy CONUS based C-130 and “chop” OPCON of these forces to the supported CINC. However, when providing support via strategic airlift forces (i.e., C-5s and C-17s) AMC retains the OPCON and provides command and control for these assets.

This alternative is built to satisfy the principle that warfighters should control the assets necessary to fight ( i.e., theater airlift). But, standardization and interoperability are

hindered due to authority, responsibility and resources being divided with no common owner having sufficient "purse string power" to adequately maintain and support the forces. Finally, a lack of a single face for customers desiring support complicates his airlift problem and can lead toward confusion and frustration.[109]

**Implications**

Relating the multiple command organizational design to Allison's Models, one should expect activity and relations reflective of Models I, II, and III dependent upon the decision-making situation and the parties directly involved in specific interaction. As far as the individual CINCs are concerned, and their definition of maximization, Model I practices can be expected. "One base, one boss," so to speak would have the CINC conducting necessary calculations to determine cost benefit evaluations to determine what decisions best meet the requirements necessary for his successful mission accomplishment. However, when considering the airlift resources as a national asset and the need for interactions among the MAFs, the decision-making processes of this design could be primarily aligned with Model III. The potential exists for three independent operations driven by independent goals and motivations--potentially looking out for their own best interests at the expense of others. In weighing the different considerations, it seems fair to expect a CINC to apply more value to practices that favor effectiveness or responsiveness, given his responsibility as defined by the NCA. On the other hand, day-to-day operations within their area of responsibility (AOR) could adhere to Model II SOPs. But even regarding these SOPs, if the independent MAFs are marching to different drummers, the regular interactions between the staffs could begin to rub and result in a "seized" system unable to conduct mutually supporting operations. As a result, based upon the relationships with the other MAFs, staff interactions could also adhere to Model III concepts of operations. Dependent on interrelationships, the aspect of bureaucratic self-serving motivations associated with Model III could have devastating consequences for this organizational design. Though Model III may be inevitable in some

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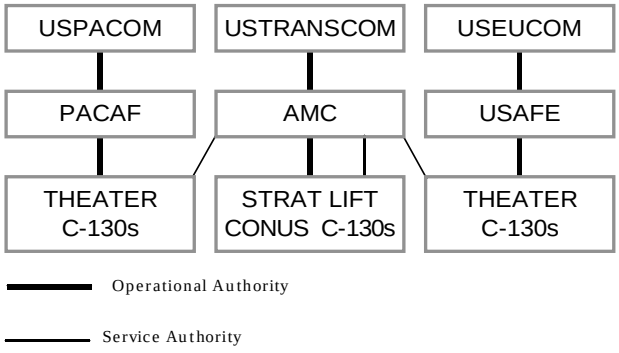
[108] General Walter Kross, Commander, Air Mobility Command, address to the Airlift Tanker Association Convention, Anaheim, CA., 25 Oct 97.
[109] AMC White Paper, 5.

situations, its underlying assumptions have the potential to grind away at the core values of the Service.

Single Service Authority, Multiple Operational Control - Alternative #2




Source: Air Mobility Command White Paper, *Reviewing the Airlift System*, (Scott AFB, IL.: AMC/XPDS, 1996), 5.

Figure 9. Single Service Authority, Multiple Operational Control - Alternative #2

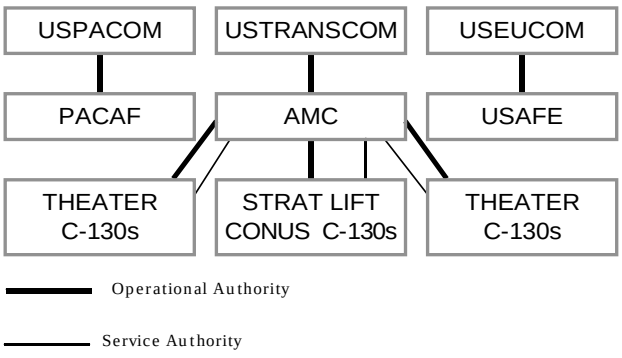
Figure 9 shows an alternative that transfers the organize, train and equip functions for organic airlift forces to AMC. In this design, AMC develops procedures and procures all the necessary equipment to operate both theater and strategic airlift assets. As Air Force component commands, PACAF and USAFE would establish airlift command and control system requirements with which AMC would dovetail. AMC would provide an organization within each theater that would be administratively responsible to AMC, but as the airlift force provider, would directly report to the theater staff when required. AMC would maintain the capability to deploy and establish a theater airlift system in areas of responsibility (AORs) where none is permanently stationed. Doctrinally, under figure 9 the theater CINC provides direction to an airlift system that is basically operating as it would in peacetime and as such, subsequently can ease into the transition from peacetime footing to contingency operations to wartime execution. Having given up all service authority regarding his airlift assets, some argue the major drawback in this alignment is the potential for airlift execution to be unresponsive to theater CINC requests or requirements.[110]

[110] ibid.

**Implications**

Given the organize, train and equip function for airlift is tasked to AMC under this proposal, the preponderance of decision-making practices should reflect those of Model I. Given the vast requirements demanded of an airlift system, AMC would be expected to blend the efficiencies demanded in peacetime, with the effectiveness and responsiveness critical to success in executing wartime operational plans. These practices would be supported by funding strategies that capitalized on existing and future capabilities through proper modernization plans and necessary acquisitions. Of course this interactive process would be handled through Model II SOPs including showing direct support for the warfighting CINC's integrated priority lists. With OPCON of theater lift assets being maintained by the warfighting CINCs, and units permanently stationed within the theaters, the transition to wartime operations should be transparent. Additionally, the theater-orientation, so critical to successful accomplishment of initial mission taskings, is maintained and enhanced by permanent party presence and can be past more easily to augmenting forces through unit interactions or interfly operations as the train and equip functions all have their genesis with AMC. Equally, as important when it comes to warfighting, the execution of operational plans and their necessary support can and should be centralized in the theater. As we saw in Desert Storm, this organization of airlift adapted itself to the specific situation and provided the direct support necessary to the theater CINC. Making for "more proof in the pudding," USCENTCOM had no airlift assets assigned at the time of Desert Shield/Storm. The benefits gained by commonality within weapon systems, and funding strategies to assure capability, make this notional alternative attractive to both those concerned with efficiencies and effectiveness.

Single Source Provider Of Airlift - Alternative #3




Source: Air Mobility Command White Paper, *Reviewing the Airlift System*, (Scott AFB, IL.: AMC/XPDS, 1996), 5.

Figure 10. Single Source Provider Of Airlift - Alternative #3

The third alternative depicted in figure 10 gives USTRANSCOM responsibility for providing all organic Air Force airlift services, as depicted, worldwide. There is no longer intertheater/intratheater concern, as USTRANSCOM would balance the efficiency versus effectiveness equation. As the Air Force component to USTRANSCOM, AMC would organize, train, and equip all airlift forces and develop procedures and procure equipment to operate and manage theater and strategic airlift assets. AMC would have a theater presence to ensure that its principal user's needs are being met and would augment its theater system when required. As the airlift force provider, AMC would maintain the capability to deploy and establish airlift systems in AORs where none is permanently stationed, but required in response to contingency operations.

This final alternative supports the idea of centralized control over a finite resource. It provides the customer with a single point of contact for airlift and makes USTRANSCOM the single entity to provide transportation to the joint community. The seamless airlift system that results from this organizational design will allow for the smooth "peace to war" transition because "theater-based, augmenting, and strategic forces would be owned and operated by one Command."[111] Conversely, this plan is opposite of the demand for warfighters to control the assets necessary for their fight, and opponents will highlight the risk of unresponsiveness no matter the reason.

[111] ibid, 6.

**Implications**

This alternative's decision-making processes would be heavily reflective of Model I value maximizations supported by Model II standard practices for recurring operations.. Not only is AMC, through USTRANSCOM, responsible for the organize, train and equip function as in Alternative II, but it is the sole executor of airlift operations in support of all warfighting contingency plans. Though the efficiencies demanded during peacetime may easily be attained through this centralized control, the focus on the individual theaters could just as easily be lost and the corresponding requirement for responsiveness during conflict. However, if a successful blend could be maintained (efficiency and effectiveness), this alternative can allow for the concentration of forces where and when necessary unlike the other two alternatives. In the prior alternatives, theater forces are divided up and in essence, probably are not sufficient to execute in and of themselves (i.e., they would require augmentation). So as in the case of the Plains Indian Wars, divided resources may not be up to the challenge and in the end be over taxed by requirements. [112] Given this third alternative, USTRANSCOM, in accordance with NCA directives could allocate the forces to respective theaters as required. Additionally, to balance responsiveness and effectiveness, basing of airlift assets should be expected within theaters, and in fact, using Model I practices, it may be beneficial to distribute C-17s or C-5s outside the CONUS. However, building this "super" transportation command could definitely have Model III implications not only within the Air Force, but also the Joint Staff and with inter-agency activities. Though far fetched, some would argue using the bureaucratic model that its underlying assumptions and interactions may sow the seeds for a federal transportation conglomerate in which the military services would become merely a customer as opposed to an owner.

The bottom-line is that the warfighter must be supported. The questions is, given a finite resource critical to the execution of our National Strategic Policy and budget constrains, what is the best organizational design for airlift? Since the entire spectrum of military operations relies on airlift, the demands will always outweigh the capability.

[112] Lieutenant Colonel Clay Chun, School of Advanced Airpower Studies, Maxwell AFB, AL., interview with author, 17 April 1998.

Given this fact of life and the realities of fiscal limitations coupled with corporate Air Force modernization and acquisition strategies, centralized control clearly provides the most efficient management, while warfighter ownership tends toward effectiveness. The challenge is to balance the two through proper posturing of our airlift assets.

# Chapter 6

# Conclusion

*"Airlift Forces are a finite, National Resource."*[113]

Throughout this paper I have attempted to communicate that the organizational design of our airlift forces has tremendous impact on their use and capabilities. Though airlift may not be in the forefront of everyone's mind day-to-day, it is arguably the linchpin to success when our national leaders decide to become involved in a myriad of situations around the globe. Whether supporting the diplomatic, economic, or the military instrument of power, airlift moves the bulk of the quick response assets and their support. This being the case, and given the expected budgetary horizon of the future and the demands to maximize resource usefulness, it makes sense that our limited airlift force be administered in a matter that best attains the efficiencies offered by a single-manager, yet is responsive to the demands of the warfighting CINCs. This organizational design would be responsible for ensuring adequate lift assets, with the necessary capabilities, would be maintained and poised to support the requirements of the National Command Authority (NCA).

This position is supported by historic precedence. The Secretary of Defense, James R. Schlesinger, expressed a very similar opinion in 1974 when he issued a PDM directing a complete consolidation of DOD airlift forces into the Air Force. Secretary Schlesinger and the supporters of this move realized the benefits to be gained. Centralized administration of airlift forces could take advantage of value-maximizations via Model I decision-making, while utilizing the economies of scale and standard

operating procedures inherent in Model II practices to best serve the needs of an Airlift System. The challenge was to ensure airlift provided the best support through responsiveness, reliability, and efficiency. As is intuitively obvious, these goals are not always compatible and serve as managerial dilemmas to daily operations.[114]

An organizational design that institutionalizes multiple-ownership of a limited resource arguably does so at the expense of efficiencies and many of the benefits to be gained through economies of scale. Additionally, when a warfighting CINC is detracted from his primary purpose to handle logistic concerns and support function matters, he is less able to focus on the fight at hand. However, it must be kept in mind that an in-theater tactical airlift system operates in an environment in which effectiveness cannot be measured solely in parameters such as ton-miles or tons per flying hours, rather the measure of effectiveness would be more reflected in its response to an airlift request and the subsequent reliability of that response.[115]

The crux of the organizational design question and the choice between the alternatives presented in Chapter 6 rests on three issues: (1) should airlift be a seamless system, offering the required support to all customers or should it be apportioned to the theater CINCs; (2) is there a real conflict between the concept of a single airlift manager and the idea of unified theater commanders; and (3) how will the management of a finite resource of national importance be executed to ensure proper capability.[116] Of course there are arguments from all sides concerning these three issues, but when taken in the aggregate, the administration of our Air force's airlift forces by a single-manager as the sole provider of a service to a myriad of customers, can allow for the proper balance between efficiencies and effectiveness.

The unified commands exist and operate even though they do not have their own space forces, nor their own special operations assets. These capabilities are administered by a single-manager that meets the demands of numerous users while ensuring the

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[113] Lieutenant Colonel Chris J. Krisinger, "Towards a Seamless Mobility System: the C-130 and Air Force Reorganization," *Air Power Journal*, Fall 1995, 36.
[114] Brigadier General William G. Moore, Jr., "Tactical Airlift, November 1967-June 1969," 834th AD/CC End of Tour Report, 1.
[115] ibid, 41.

capabilities of finite national resources. So the precedent has been set in the past and is in practice today. Our NCA will set policies that direct strategies and priorities that will directly govern the apportionment of available lift supported by one commander responsible to provide integrated air transportation. As a unified theater CINC should be ready to fight, a unified transportation CINC, including a seamless airlift system, should be prepared to execute a capability that provides the global reach necessary to support theater actions.

Consolidation of airlift under the Air Force and, equally as important, the idea of single-manager administration for the organize, train, and equip functions of airlift have been foretold throughout the history of the Air Force. Referred to as "his eyes" into the different theaters, General Hap Arnold wanted airlift centralized for the benefit of the service. His position was reinforced by the early proponents of airlift, and was executed as a result of problems associated with decentralization/multiple-ownership in Vietnam. Finally, Desert Storm proved the value of the integration of airlift assets and the consolidated organizational design structure. The airlift system's capabilities were demonstrated by rapidly deploying forces crucial to the halting of the Iraqi invasion and were then reinforced by blending efficiencies and effectiveness in moving critical sustainment supplies.

Though this paper touches on only one of the many aspects of the airlift mission, however, organizational design can be seen as a foundational support when considering other areas. Organizational design influences command and control questions, both in peacetime and war. It affects one of the most often cited tenents of air power as it relates to airlift--its inherent flexibility. And the design can definitely be a predictor of the decision-making style and resultant expectations regarding policy affecting airlift force's capability and performance.

Airlift means global reach; in most operations it is the leading force in support of the mission, but sometimes it is the mission. As dollars and other resources become more scarce, and demand continues to increase, airlift will have to depend upon wise employment practices if the nation is to realize the capabilities of this limited resource.

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[116] Krisinger, 32.

Turf battles must give way to fiscal and resource limited realities. It seems clear to me that the proven concept of consolidated airlift operations resulting in single-manager administration of "service" functions with OPCON of theater lift held by warfighting CINCs, alternative #2, can result in a seamless airlift system that best exploits the ability to maximize performance of forces, and balance efficiency with effectiveness in an Airlift System.

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