

Air Command and Control in Small Wars

**A Monograph
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Abstract

AIR COMMAND AND CONTROL IN SMALL WARS by Major Mark R. Heusinkveld, USAF, 62 pages.

The small wars fought by the French in Algeria and the United States in Vietnam provide lessons for the United States military to use today. Although neither France nor the United States met their strategic objectives, their command and control (C2) models show contrasting examples. The French model allowed air commanders to concentrate solely on the needs of ground commanders in their geographic area at the expense of the ability to mass airpower when needed. Commanders in Vietnam required a system that catered to the political environment in Southeast Asia and therefore the doctrine of centralized control and decentralized execution suffered. In order to strike a balance, the United States Air Force (USAF) developed the Air Component Coordination Element (ACCE) to allow centralized control of airpower while still addressing the needs of geographic ground commanders. As the ACCE continues to evolve, leaders must remember the lessons of Vietnam and Algeria to insure they make the best use of airpower.

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Introduction

There has been much discussion about the best use of airpower in small wars, specifically with regard to current operations in Afghanistan. Coalition air forces involved in Operation Enduring Freedom use the same command and control (C2) structures doctrinally established for all types of operations. The Air Force doctrine of centralized control and decentralized execution drives the makeup of C2 within the operation. Is there a better way to structure airpower in small wars?

Although neither France nor the United States met their strategic objective, air operations by the French in Algeria and the United States in Vietnam provide contrasting models of C2 structures for a comparative case study. The French saw the importance of a decentralized model to maximize the support of ground troops. To use modern terminology, the French set up a joint task force in each geographic section of Algeria. Each geographic area had its own air command post collocated with the French Army command post within the region. The United States, on the other hand, centralized control of aircraft. United States Air Force (USAF) doctrine, in Vietnam, required that air assets be under the centralized control of a single air commander. Interservice rivalry heated this debate; the USAF was unwilling to allow anyone other than an air commander to control aircraft. The USAF argued that decentralization of airpower could easily have wasted the scarce air resources found in theater. However, it was centralized in name only. Aircraft were commanded and controlled under a variety of organizations to include, 7th Air Force, 13th Air Force, the Central Intelligence Agency, and the US Embassy.

Both operations provide insight into the effectiveness and efficiency of the air C2 structures. This monograph asks if the structures used by the air forces in these conflicts can provide lessons for the United States in small wars today. If current structures are not as effective or efficient, commanders can modify the structures, using the insights gained by this monograph, to provide better support to ground operations in today's small wars.

Organization

The first chapter of the monograph introduces the research question and its significance. To clarify the discussion and comparison, the second chapter begins with definitions. An initial list of required definitions includes integration, small wars, C2, centralized, decentralized, and airpower. The second chapter also covers doctrinal terminology and discusses the purpose of C2. Finally, the second chapter introduces the Competing Values Theory of Organizational Effectiveness by Robert Quinn and John Rohrbaugh.¹ The next two chapters apply the Competing Values Theory to the cases. Chapter Three uses evidence gathered from the French in Algeria. The fourth chapter does the same with the United States in Vietnam. Once evidence gathering and theory application is complete, the concluding chapter analyzes the findings by comparing and contrasting the air C2 structures of the French in Algeria, the United States in Vietnam, and discusses the current system used by the United States. This chapter provides insights from the comparison that leaders can apply to future small wars.

Research Methodology

This monograph uses a case study methodology for examining air C2 structures in Algeria and Vietnam. The Competing Values Theory of Organizational Effectiveness is a theoretical tool for evaluating organizations and the monograph uses this model for further analysis. The Competing Values Theory produces the Spatial Model of Organizational Effectiveness that shows the emphasis of the organization. The Spatial Models from each case study are compared and contrasted for find lesson applicable to current small wars. Finally, the monograph uses these lessons to analyze current air structures in place today.

¹Robert E. Quinn and John Rohrbaugh, "A Spatial Model of Effectiveness Criteria: Towards a Competing Values Approach to Organizational Analysis," *Management Science* 29, no. 3 (March 1983): 363-77.

Air Command and Control Theory

This section of the monograph lays down baseline fundamentals for use throughout the remainder of the text. This is also where the analytical tool is introduced.

Air Command and Control Definitions

Airpower is the most difficult of all forms of military force to measure, or even express in precise terms.²

— Winston Churchill

When executing C2, all military organizations must deal with uncertainty. The structure of the organization determines how a military organization deals with uncertainty. Military commanders are confronted with less information than is required to perform a task and the organizations must react to this uncertainty. Martin van Creveld states that military organizations tend to deal with this uncertainty in two different ways. One is to increase the information that the command is able to process and the second is to enable the organization at the lowest levels to work in the environment of less information.³ The USAF deals with the tension between these two approaches with centralized control and decentralized execution, but these can be nebulous terms. The purpose of the remainder of this section is to define the terms used for the remainder of the monograph.

Joint Publication (JP) 1 defines command as “the authority that a commander in the armed forces lawfully exercises over subordinates by virtue of rank or assignment.”⁴ It also states

²Lt Col Johnny R. Jones, “Air Power,” *Air and Space Power Journal, Chronicles Online Journal*, <http://www.airpower.maxwell.af.mil/airchronicles/cc/jjones.html> (accessed 15 June 2011).

³Martin Van Creveld, *Command in War* (Cambridge: Harvard University Press, 1987), 269.

⁴Joint Chiefs of Staff, Joint Publication (JP) 1-0, *Personnel Support to Joint Operations* (Washington, DC: Government Printing Office, 2005), GL-5.

that this “includes that authority and responsibility for effectively using available resources and for planning the employment of, organizing, directing, coordinating, and controlling military forces for the accomplishment of assigned missions.”⁵ Although control is not defined on its own, Joint Publication (JP) 1 defines C2 as “The exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission.” This definition further states that “command and control functions are performed through an arrangement of personnel, equipment, communications, facilities, and procedures employed by a commander in planning, directing, coordinating, and controlling forces and operations in the accomplishment of the mission.”⁶ Command, then, is simply the authority while control is the exercise of that authority. For the purposes of this monograph, air C2 is defined as the authority over air forces as well as the execution of planning, directing, coordinating, and managing of air forces and air operations in the accomplishment of the mission.

It is important that both command and control are included in the discussions of airpower. In air operations, a leader far from the battlefield can command a military unit, such as a squadron. When that unit executes missions, a Theater Air Control System likely controls them. It is an agency controlling, not an individual. These elements do not command the assets they control.⁷ The doctrine of centralized control decentralized execution does not address command.

The next group of definitions revolves around the terms centralized control and decentralized execution. To begin, JP 3-30 defines centralized control as “placing within one commander the responsibility and authority for planning, directing, and coordinating a military

⁵Joint Chiefs of Staff, JP 1, GL-5.

⁶Ibid., GL-6.

⁷Michael W. Kometer, *Command in Air War: Centralized Versus Decentralized Control of Combat Airpower* (Maxwell AFB, AL: www.MilitaryBookshop.co.uk, 2010), 60.

operation or group/category of operations.”⁸ Although this definition includes both command and control functions from JP 1, this monograph assumes that if the single commander has “authority and responsibility” then he must have command. JP 3-30 defines decentralized execution as “delegation of execution authority to subordinate commanders.”⁹ For the purposes of this monograph, decentralized execution is defined as flexibility at the tactical level to deal with the uncertainty of combat.¹⁰

Winston Churchill was correct in his statement above, but a logical debate about the C2 of airpower requires a solid definition. A useful definition of airpower, and the one used for this monograph is from General “Hap” Arnold, one of the founding fathers of the USAF. Arnold defined airpower as “a nation’s ability to deliver cargo, people, destructive missiles and war-making potential through the air to a desired destination to accomplish a desired purpose.”¹¹ This is a broad definition and refers to the totality of air capability. Although Arnold’s definition includes civilian, commercial, and private activity, this monograph focuses primarily on war-making components. Finally, this monograph uses the 1940 United States Marine Corps definition of small wars. It states “small wars are operations undertaken under executive authority, wherein military force is combined with diplomatic pressure in the internal or external affairs of another state whose government is unstable, inadequate, or unsatisfactory for the

⁸Joint Chiefs of Staff, Joint Publication (JP) 3-30, *Command and Control for Joint Air Operations* (Washington, DC: Government Printing Office, 2010), GL-7.

⁹*Ibid.*, GL-8

¹⁰For an excellent discussion about the future of centralized control decentralized execution see Lt Col Clint Hinote, *USAF Centralized Control and Decentralized Execution: A Catchphrase in Crisis* (Maxwell AFB AL: Air University Press, 2009).

¹¹Dik Alan Daso, *Hap Arnold and the Evolution of American Airpower* (Washington, DC: Smithsonian Books, 2001), 4.

preservation of life and of such interests as are determined by the foreign policy of our nation.”¹²

This definition does not preclude conflicts, such as the Vietnam War, in which the nation spent a large number of lives and resources.

Air Command and Control Theories

Military classics dealing with command and organization often do not include airpower, primarily because they were written before military airpower became common.¹³ Early airpower theorists such as Giulio Douhet and Billy Mitchell addressed how the new aircraft would be operated by an independent air arm, but not integrated into combined arms in the way a modern military operates.¹⁴ Airpower in small wars has received even less coverage. Primarily, the texts involve lessons learned from previous engagements.¹⁵ One example is by French general G. J. M. Chassin written in 1952. General Chassin was the air officer commanding, Far East, during the French conflict in Indochina. Although French operations in Indochina are outside the scope of this monograph, the French used lessons from Indochina extensively in Algeria and accounts from Chassin are some of the first regarding airpower in small wars. Chassin comments on command structures, mission types, and the nature of the terrain in Vietnam. His conclusions are important to both case studies because he addresses the French C2 system as well as small wars in Vietnam.

¹²U.S. Marine Corps, *Small Wars Manual 1940* (Washington, DC: Government Printing Office, 1940), 1.

¹³Lt Col Michael Kometer addresses this issue in his book, *Command in Air War*. Some of the classics include Sun Tzu, Jomini, Clausewitz, and Moltke.

¹⁴William Mitchell, “Winged Defense: The Development and Possibilities of Modern Air Power-Economic and Military,” in *Roots of Strategy* Book 4, ed. David Jablonsky (Mechanicsburg, PA: Stackpole Books, 1999), 484.

¹⁵See James S. Corum and Wray R. Johnson, *Airpower in Small Wars: Fighting Insurgents and Terrorists* (Lawrence, KS: University Press of Kansas, 2003).

Chassin begins with justification for a discussion airpower in a war in which only one side used aircraft. He states that the war in Indochina reinforces two “eternal laws” that govern war.¹⁶ First, is that when weapons make a sudden increase in the efficiency of firepower on the battlefield, the enemy response is to disperse and fall back on guerilla tactics. The second law is that modern weapons can be of more harm than good and tend to bring combat back to the “human level.”¹⁷ Chassin goes on to describe the nature of the war in Indochina. He states that the French were at a considerable disadvantage because they needed to protect and preserve, not simply destroy Vietnam.¹⁸ Chassin then moves on to the command structures required for a small war. He opens by stating “the higher command must be integrated and must fully coordinate all operations on land, sea, and air.”¹⁹ The commander in chief of all armed forces in the region must have a staff the equally represents all three arms in order to prepare the general for war. In modern conflict, the land component cannot operate without airpower which “always plays a preponderant part” and “it is they who swing the balance in our favour.”²⁰ Chassin argues that, in planning, the conditions of employment of the air arm must be considered first and then ground operations should be tailored to fit the air capabilities. If ground operations are first planned and then the air is added “willy-nilly,” failure will ensue.²¹

Chassin also addresses the command structures for execution. He begins by stating “commanders of ground forces have realized that the air forces cannot come direct under their

¹⁶G. J. M. Chassin, “Lessons of the War in Indochina,” *Interavia* 7, no. 12 (1952): 670

¹⁷*Ibid.*

¹⁸*Ibid.*, 671.

¹⁹*Ibid.*

²⁰*Ibid.*

²¹*Ibid.*

orders, as for instance the artillery does.”²² The procedure is that ground commanders ask the air commanders for missions, not aircraft types, and leaves the air commanders the liberty to accept or refuse based and decide the means to use. Similarly, the air commanders must content with the land command providing its defense using the ways and means he deems necessary.²³ French theory of employment of air forces was no different than those of modern USAF doctrine. It insisted on three equal and independent components that work together to plan and execute the war. The French gave air superiority top priority followed by the destruction of the enemy’s war potential. Support for operations on the surface is a tertiary role.²⁴ This theory required modifications in French operations in Indochina.

The reality of small war in Indochina meant that no air forces were used for the destruction of enemy war potential. Instead, the French gave priority to direct support of ground forces, and long range attacks were only used with consent of the interservice command and only when assets were not already used for close air support. Therefore, local commands were apprehensive about allowing air assets to attack enemy communications and supply lines, even though those attacks had greater effect on the enemy than attacks on a “fortified village in the delta.”²⁵ Chassin claims the friction comes from a lack of understanding of air capabilities and costs. If a mission can be accomplished by artillery, a much less costly asset, then an aircraft should not be assigned to the mission. Side-by-side independent air and ground commanders under an interservice commander-in-chief insures that limited airpower assets are used in the most efficient and effective manner. Chassin closes his discussion of air C2 by stating “the whole

²²Chassin, 671.

²³Ibid.

²⁴Ibid.

²⁵Ibid., 672.

tactical air force must remain under a single command and that to distribute it in small batches among the ground units, as was done in 1940, is the surest way of reducing its efficiency to zero.”²⁶

During the same time period, USAF text was limited regarding small wars. One of the few articles from the Air University was by Colonel William M. Reid entitled “Tactical Air in Limited War.” This article dealt with both the USAF experience in the Korean War and the French in Indochina. In it, Reid said that the airpower in Korea was limited by political constraints and not by tactical employment or the command structures. Discussing the French, Reid claimed that “the French immediately dissipated their air resources into small packets under the command of Army formation commanders with each packet working on its own plan.”²⁷ This is a very different conclusion than that of Chassin. Reid claimed that although the air and ground commanders were intended to be equal, the air commander was subjugated to the ground commander. The French parceled out air forces to the company level in jungle areas and there was no air-ground planning at any level. Although his critique of French airpower in Indochina was scathing, both Reid and Chassin came to the same conclusion. Airpower “must be carefully coordinated through proper centralized control.”²⁸

Following his USAF career, General William W. Momyer wrote a book entitled *Airpower in Three Wars* that describes the evolution of airpower strategy, C2, and tactics from the Second World War to Vietnam. General Momyer was the deputy commander for air operation, Military Assistance Command, Vietnam and the commander of Seventh Air Force

²⁶Chassin, 672.

²⁷Col William M. Reid, “Tactical Air in Limited War,” *Air University Quarterly Review* (Spring 1956): 45-46.

²⁸Ibid., 47.

from July 1966 to August 1968 when he assumed command of Tactical Air Command.²⁹ Momyer does not write about small wars in particular, but provides insight into how C2 structures originated and were modified throughout the conflicts. Momyer begins with a discussion regarding the strategy of nuclear weapons and how this affected the authority over air forces. At the time, tactical airman claimed that the type of systems needed for planning, directing, coordinating, and managing air forces in a nuclear war was the same that non-nuclear war required.³⁰ The system and procedures needed for close coordination with ground forces were necessary in nuclear operations to prevent fallout and casualties to our own forces. These same essential elements would also be adequate for a non-nuclear conflict. Therefore, the USAF did little to update systems and procedures that would be useful eventually in Korea and Vietnam. Momyer summarizes his C2 section of the book with a similar centralized control lesson and states that “to fragment airpower is to court defeat.”³¹ His conclusion at the end of the book also advocates centralized control, but also states that the air control headquarters needs to be within “a few hundred miles of the battles.” Although it does not come close to advocating a more decentralized model, Momyer states that “the further removed a headquarters is from the scene of combat, the greater the tendency to lose contact with hour-by-hour developments,” and the greater the chance of becoming involved in “political chessboard aspects of the war while neglecting the realities upon which success in combat depends.”³²

In his book, *Command in Air War*, USAF Lieutenant Colonel Michael W. Kometer uses Operations Desert Storm, Allied Force, Enduring Freedom, and Iraqi Freedom to discuss

²⁹General William W. Momyer, *Airpower in Three Wars* (Washington, DC: Government Printing Office, 1986), iv.

³⁰Ibid., 3.

³¹Ibid., 108.

³²Ibid., 337.

centralized control and decentralized execution. The study looks at arguments between the services regarding the control of airpower, how the different services prefer to function, and determines how technology and control have affected each other in the age of information.³³ The book provides a complete picture of the control of airpower by looking at airpower as a system.³⁴ Kometer claims that there is a constant friction between the pilots in the battle and the individuals in the rear directing the execution of missions. On top of that, there are constant battles between the services. The Army claims the centralized control that the Air Force uses is too cumbersome to respond to the needs of ground troops.³⁵

Kometer concludes that the “incredible pace of technological development throughout the last decade and a half has not altered the fundamental truths about C2 of airpower, which are similar to the fundamental truths about the C2 of other military power.”³⁶ Although airpower is facilitated by technology, it is still a human system in which the commander’s job is to get all the players to work together to “accomplish an ill-defined mission in an environment of uncertainty.”³⁷ In all of the case studies Kometer uses, whenever leaders tried to use information to manage subordinates actions, they were less able to handle uncertainty. Instead, the most successful leaders used C2 systems that empowered as well as constrained subordinates in order to establish learning organizations.³⁸

³³Kometer, 7.

³⁴Ibid., 11.

³⁵Ibid., 7.

³⁶Kometer, 269.

³⁷Ibid.

³⁸Ibid., 270.

Kometer establishes a general formula that characterizes the C2 of air. He says a commander at any level should set goals for the organization that are to be unified under his or her command and empower subordinates to come up with plans for their respective parts. The commander should enter a bruising, running dialog to critique and correct subordinates' plans, essentially making them his or her own and ensuring the different parts are coordinated. At the same time, he should create depth in the command relationships by defining authority and providing situational awareness in the places where diverse organizations will need to coordinate. He should use people and technology to create a directed telescope to track the actions and hold subordinates accountable and finally assess the effectiveness of the actions and the need for a change in plans.³⁹

This monograph distills Kometer's six parts of the formula for C2 of the air into concepts to be assessed with the Competing Values Theory of Organizational Effectiveness described below. The six parts are goals, planning, dialogue, authority, telescope, and assessment. Although the individual words do not describe the parts of the formula fully, they focus the study toward the optimum way to avoid pitfalls in C2 of the air.

Competing Values Theory of Organizational Effectiveness

To assess the effectiveness of air C2 in small wars, there must be criteria for analysis that shows both the strengths and weaknesses of the structures while also addressing the overall effectiveness in each conflict. This monograph uses the Spatial Model of Effectiveness Criteria by Robert E. Quinn and John Rohrbaugh. Quinn and Rohrbaugh provide a framework for organizational analysis through an approach that arranges criteria which organizational theorists and researchers use to evaluate the performance of organizations. The framework provides a

³⁹Kometer, 276-277.

spatial model useful for indication of which concepts are most central to the organization and guides subsequent efforts at organizational effectiveness.⁴⁰ This model is useful for the study of airpower because of the broad definition presented in the definitions chapter. The effectiveness of airpower cannot be placed on an objective scale. Instead, Quinn and Rohrbaugh's model is a construct to judge where an air organization places its values.

Effectiveness is a central theme in all organizational analysis but it comes with many problems. First, the definition of effectiveness is elusive.⁴¹ One reason is because effectiveness is not a concept but a construct.⁴² Concepts in the business world such as productivity or capital growth could be included in the construct of effectiveness, but they are not required. The highly abstract nature of a construct leads to confusion in organizational effectiveness literature. In order to truly measure effectiveness, an investigator must consciously choose a precise set of criteria. Quinn and Rohrbaugh set out to find the indices of organizational effectiveness that could be universally applied in assessments.⁴³

Quinn and Rohrbaugh used surveys of researchers with interests in organizational effectiveness to judge criteria for similarity and prevent overlap. The results suggested a three axis spatial model for organizational effectiveness. The first value is related to the organizational structure, from an emphasis on stability to an emphasis on flexibility. The second value is an organizational focus, from an internal, micro emphasis on the well-being and development of people in the organization to an external, macro emphasis on the well-being and development of the organization itself. The third and final dimension is the organizational means and ends. This

⁴⁰Quinn, 363.

⁴¹Ibid.

⁴²Quinn, 363. While a concept is a general notion or idea, and construct is a complex idea formed by a number of simpler elements.

⁴³Quinn, 365.

dimension emphasizes important processes verse final outcomes.⁴⁴ A visual presentation of the three value sets and the effectiveness criteria is shown in Figure 1.

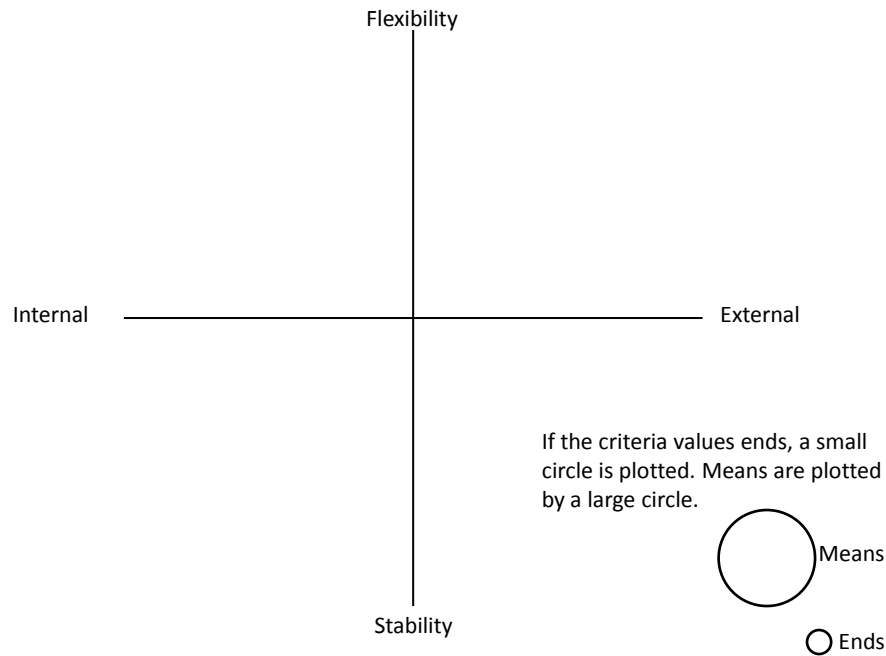


Figure 1. Spatial Model of Effectiveness Criteria

Source: Created by author, adapted from Robert E. Quinn and John Rohrbaugh, "A Spatial Model of Effectiveness Criteria: Towards a Competing Values Approach to Organizational Analysis," *Management Science* 29, no. 3 (March 1983): 363-377.

The first pair of competing values, flexibility versus stability, reflects a basic dilemma of organizational life. The two viewpoints emphasize the authority, structure, and coordination on one hand while flexibility in an organization emphasizes diversity, individual initiative, and organizational adaptability.⁴⁵ An airpower organization that emphasizes flexibility will be more

⁴⁴Quinn, 369.

⁴⁵Ibid., 370.

likely to allow tactical flexibility and target selection to the aircrew. An air construct that emphasizes stability, will take a greater part in aircraft allocation and target selection. This is very similar to centralized verse decentralized control.

The second pair of competing values is internal versus external focus. From an external view, an organization should be designed for the ultimate goal of accomplishing its tasks. The emphasis is on overall competitiveness in the often changing environment. From the internal view, participants have unique likes and dislikes that require consideration.⁴⁶ Additionally, participants require consideration, appropriate information, and stability. An air C2 organization that emphasizes the internal view will be more likely to use airpower as efficiently as possible. When the external value is maximized, overall competitiveness is emphasized at the expense of internal harmony.⁴⁷ In air C2, an organization with an external view would be more likely to satisfy the needs of a ground commander in the method that the ground commander pleases. The control and execution of airpower is central to this debate.

The third and final set of competing values is means versus ends. All organizations attempt to achieve certain objectives and to develop group products through the manipulation of facilities. A definition of organizational effectiveness must take into account the objectives of the organization and the means through which they obtain those objectives.⁴⁸ In air C2, an organization with high means values will focus on processes such as planning. An organization with high ends values will likely focus on the final outcome, such as pure aircraft generation and

⁴⁶Quinn, 370.

⁴⁷Ibid.

⁴⁸B. S. Georgopoulos and A. S. Tannenbaum, "A Study of Organizational Effectiveness," *American Sociological Review* 22 (1957): 534-540.

reaction. This is similar to the measures of effectiveness and measures of performance from current joint doctrine.⁴⁹ The competing values are a tool to judge organizational effectiveness.

The Spatial Model of Effectiveness Criteria is made up of three different concepts, but it must predict overall organizational effectiveness. The model does not combine the concepts into a single dependent variable to predict organizational effectiveness.⁵⁰ Instead, the model uses the construct to judge where an organization places its values. It allows the researcher to be aware of the “value choices to be made” and “clarify the extent to which certain concepts are valued.”⁵¹ It is a comprehensive and balanced set of indicators to judge organizational effectiveness within the conflicts presented in the following chapters.

Air Command and Control in Algeria

A look at the French conflict in Algeria offers insight into why the French Air Force used a certain type of air C2 system and how that system changed as the war progressed. This section is by no means comprehensive and numerous books cover the conflict backgrounds and include airpower specific lessons, but it does cover the portions of the background of the conflict important to the application of airpower.⁵² Following a background discussion, the chapter focuses on the air C2 in the small war in Algeria from 1954 to 1962.

⁴⁹Joint Chiefs of Staff, Joint Publication (JP) 5-0, *Joint Operation Planning* (Washington, DC: Government Printing Office, 2011), 121.

⁵⁰Quinn, 375.

⁵¹Ibid.

⁵²For a comprehensive text on the French in Algeria see Alistair Horne, *A Savage War of Peace: Algeria 1954-1962* (New York: Viking Press, 1978).

Background

Algeria is a large country - four times the size of France - but only a small portion along the coast has ever been permanently inhabited.⁵³ From the Mediterranean coastline, the landscape consists of fertile coastal land with mountain ranges to the south. South of the mountain ranges is the Sahara Desert. The varied and largely uninhabited terrain makes Algeria a difficult place in which to maintain order.⁵⁴ The now independent country of Algeria had been a French colony since 1830 when French expeditionary forces landed on a beach west of Algiers, the capital and largest city.⁵⁵ In order to pacify the North African tribal area, the French placed colonists within the country and had little regard for who previously owned the land or what importance the land was to the indigenous tribes. Although the government encouraged Frenchmen to settle in Algeria, numerous other people of European descent immigrated. Europeans in the country had political and economic privileges denied to the local population, including French citizenship. As time progressed and two world wars were fought in Africa, Algerians were called into service for the French, but gained few rights as a result.⁵⁶ Years of intolerance by the French and political frustrations for indigenous, Algerians culminated with attacks across the country on All Saints' Day in 1954 by the *Front de Libération Nationale* or National Liberation Front (FLN).⁵⁷ The initial French reaction did not help pacify the country. French troops indiscriminately rounded up suspects and sent them to prison. The French used aircraft to attack suspected insurgent

⁵³Francois-Marie Gougeon, "The "Challe" Plan: Counter-insurgency Operations in Algeria 12/1958-04/1960," in I100, *Introduction to Stability Operations* (Fort Leavenworth, KS: Government Printing Office, 2009), 1.

⁵⁴Jonathan M. House, "Overview of the Algerian Conflict," in W100, *Advanced Operational Warfighting* (Fort Leavenworth, KS: Government Printing Office, 2009), 1.

⁵⁵Horne, 29.

⁵⁶Ibid., 43.

⁵⁷Ibid., 87.

concentrations throughout the country in addition to indiscriminate air strikes to punish civilian population thought to be harboring insurgents.⁵⁸ If an Algerian was merely a passive observer to the conflict before prison, following a prison term they were certainly passionate supporters of the FLN. Although the attacks brought little reaction from French citizens in France, they forced the French administration to react with a buildup of military forces in the region in order to save face.⁵⁹ This buildup included aircraft to support the ground forces.

In 1955, the French began a three-pronged approach to pacify the country and stop the insurgency. Aircraft were essential to two of the three prongs. First, the French military set up local governments run by the French Army to govern, take civic action, and distribute propaganda.⁶⁰ Second, the French military established the Morice Line along the border of Tunisia and Morocco where the FLN sought sanctuary and supplies. The Morice Line consisted of barbed wire, electric fences, mines, and ground surveillance radar.⁶¹ Roving patrols of ground troops and aircraft surveillance insured the FLN was unable to penetrate the line. Attacks from both the air and the ground constituted the final prong of the strategy. These conventional operations caused much deliberate and collateral damage and were often more of a detriment to the counter-insurgency than an advantage.⁶²

The French had experience with the use of aircraft in support of ground troops in a similar situation while in an earlier war of decolonization in Indochina from 1946 to 1954, as

⁵⁸House, 3.

⁵⁹Horne, 96.

⁶⁰House, 3.

⁶¹Ibid., 4.

⁶²Ibid.

discussed by General Chassin in the Air Command and Control section of this monograph.⁶³ As the French command responded to increased FLN attacks with increased numbers of troops, *L'Armee de l'air* deployed numerous assets to use against the FLN. They built dozens of airstrips throughout the country to facilitate the use of airpower and made upgrades to already established bases.⁶⁴ Based on lessons learned in Indochina, the French saw the role of airpower to be four-fold: intelligence, transport, C2, and firepower. French aircraft, in support of ground troops, carried out intelligence both on the Morice Line and in the interior via aerial observation and reconnaissance. The French Air Force used transports for movement from one airfield to another and helicopters for movement from one zone to the other without the need for airstrips.⁶⁵ The French Air Force used flying army command posts entrusted with the execution of certain missions. Fires were brought to bear on the enemy with the attack aircraft. This included armed reconnaissance missions where the attack aircraft overflew prescribed zones and attacked objectives independently, missions of accompanying or protecting troops, and preplanned attacks.⁶⁶

The government saw tactical success along the Morice Line from 1955 to 1958 with 95 percent of all infiltrations blocked.⁶⁷ However, the war was causing unrest in mainland France, a country that had already endured military failure in World War II and Indochina. In 1958, Charles de Gaulle placed French Air Force General Maurice Challe as the commander in Algeria with

⁶³Martin Alexander and J. F. V. Keiger, "France and the Algerian War: Strategy, Operations and Diplomacy," *Journal of Strategic Studies* 25, no. 2 (June 2002): 12.

⁶⁴Corum and Johnson, 166.

⁶⁵Charles Christienne and Pierre Lissarague, *A History of French Military Aviation* (Washington, DC: Smithsonian Institution, 1986), 466.

⁶⁶*Ibid.*

⁶⁷Gougeon, 3.

orders to secure quick results. Challe devised a plan to build on the previous commander's success and set up "hunter" companies to find and kill or capture insurgents in the vast interior. The hunter companies consisted of both French and local soldiers and used unconventional techniques to locate enemy forces. They were mobile, traveled lightly, and carried powerful radio equipment. Once the enemy was located, the hunters would call in airstrikes and alert conventional troops.⁶⁸ Attack aircraft at airstrips located throughout the country were an important part of the success of this plan.

According to James Corum and Wray Johnson, "the new high performance Dassault fighters and F-86 Sabrejets were unsuitable for the conditions of counterinsurgency warfare."⁶⁹ The French Air Force certainly had more equipment at their disposal, but instead chose to use aircraft such as the T-6 Texan, T-28 Trojan, and the Douglas A-1 Skyraider in addition to a light bomber force of A-26s. One reason for the choice of aircraft was the importance that the French placed on the value of persistence and presence over the battlefield. The Morice Line required aircraft that could loiter over the area and search for infiltrations. The hunter companies needed aircraft forward deployed to austere locations to insure rapid reaction. In addition, the French did not see Algeria as merely a colony that was in upheaval but a part of metropolitan France.⁷⁰ With light aircraft, the French Air Force could make sure that the vast and remotely populated country knew of their presence. Only light attack and reconnaissance aircraft could loiter low and slow over villages to show that the French military was here to stay. High performance, fuel hungry jet aircraft would not have fulfilled this strategic objective.

⁶⁸House, 5.

⁶⁹Corum and Johnson, 166.

⁷⁰Horne, 44.

Due to Algeria's large expanses of desert with numerous places for rebel forces to hide, the French Air Force needed a large number of aircraft.⁷¹ Additionally, since the French placed aircraft at each division, technical and logistical problems required the use of simple aircraft using a minimum level of parts and maintenance training. The French Air Force lacked sufficient resources to employ high performance and maintenance intensive jet aircraft in the conflict, given these constraints. Therefore, the primary attack aircraft at the beginning of the conflict was the T-6 Texan. The attrition of T-6s due to maintenance and combat forced the French Air Force to bring the T-28 and A-1 into action. Although the older and smaller aircraft had fewer inherent problems, the dispersion of units entailed heavy costs in both technical personnel and in equipment.⁷²

As the French war in Algeria progressed, tactics evolved. At the beginning of the war, transport and intelligence was the primary role of the French Air Force, but *L'Armée de l'air* role became very offensive. A-26s bombed villages when French troops came under attack nearby. The attacks destroyed schools and civilians in markets perished. This had the adverse effect of bolstering Algerian support for the FLN instead of reducing it. Press coverage and shocking pictures of injured children also reduced support for the war in mainland France, drew international attention, and outraged the Arab world.⁷³ In the end, the French scored a military victory but did not achieve the desired political end state. Great hostility built between the French military and the Algerian people. The war lost support on the home front, hurt the economy, and

⁷¹Christienne and Lissarague, 468.

⁷²Ibid.

⁷³Corum and Johnson, 172.

tore the political fabric of the nation apart. Charles de Gaulle negotiated with the FLN in 1962 and granted independence to Algeria.⁷⁴

Although the FLN ultimately achieved Algerian independence, the use of airpower in the war was successful at the end.⁷⁵ The French began with indiscriminate airstrikes on suspected insurgents that increased the population's support for the rebels. As the war progressed, interdiction by French A-26s on the Morice Line cut off FLN supplies by 70 percent. Additionally, light attack aircraft were very successful in direct support of hunter companies that constantly harassed the enemy, reduced their freedom of movement, and isolated them from the population.⁷⁶ The rugged, easy to maintain, and efficient light attack aircraft were available in large quantity and had the endurance required by the French.

In addition to the use of the proper aircraft for the small war in Algeria, the French also had to adapt their C2 structure to maximize the efficiency and effectiveness of the aircraft. At the start of the conflict, the French Air Force concentrated their efforts primarily on support of the land and sea forces through reconnaissance, fire, and transport. The French Air Force soon realized they needed to change the way they organized their forces to better support the ground operation. This reorganization took two years to complete. In order to be most effective, they modeled their organization on the army. In 1956, the French Air Force organized their units into tactical air groupings also known as *Groupes Aériens Tactiques* (G.A.T.A.C.) a French Acronym, meaning "Aerial Tactical Groups." These groupings aligned with the French Army's geographical boundaries that separated the army divisions. In all, there were three primary G.A.T.A.C.'s and each of them had their own air command posts located at the division

⁷⁴Ibid., 174.

⁷⁵Corum and Johnson, 174.

⁷⁶Gougeon, 8.

headquarters. Since the command posts were collocated in each geographical region, the organizations were able to provide “continuous combined control of operations” within the operational command posts.⁷⁷ The beauty of this organizational structure was that the command had the flexibility to adjust operations as they were underway and maintain order with great coordination between the maneuver elements on the ground and the airborne assets. In addition, since the French Army was collocated with the French Air Force command post, the army allowed the G.A.T.A.C. to maintain complete control over all aircraft activity in the sector, to include helicopter flights.

The French Air Force provided itself with a C2 structure that allowed fast and flexible support to the ground forces against a mobile enemy that was more familiar with the environment.⁷⁸ These operational structures were modeled after the French Army’s organization. The downside to this organization was the lack of efficiency across the entire country of Algeria, and the increased overhead required. If a major operation required more air support than another, it was more difficult for them to get all assets in place to make that happen. Aircraft were not in limitless supply and could not be airborne at all times. It would be impossible for each sector to have twenty-four hour coverage without borrowing assets from other sectors. In an environment where each commander only had responsibility for his own sector, the likelihood of a commander readily giving up aircraft to another sector was low. In addition, since each G.A.T.A.C. required its own command post, the cost in overhead was much greater. Every sector needed its own command post, radios, and finally the personnel to run it all. The decentralized employment of resources had some negatives, but it achieved outstanding results. They were credited with the

⁷⁷Christienne and Lissarague, 463.

⁷⁸Christienne and Lissarague, 464.

destruction of 40 to 50 percent of armed groups personnel and material and left the insurgency profoundly disrupted.⁷⁹

The French saw airpower in Algeria as primarily responsible for support of the ground forces. With air commanders subordinate to the division commander in a specific sector, there was no question about how the aircraft would be used. The French decentralized the command of the air assets to the individual command post responsible for specific sectors. There is, of course, a downside to this organizational structure. Without overall situational awareness of the entire conflict, aircrews would have difficulty supporting ground forces that happen not to be in their sector. This could lead to enemy sanctuaries close to the dividing lines of the sectors. In addition, timely and effective mission execution in another sector was less likely if it did not benefit the ground commander who owns the aircraft, even if it was good for the conflict as a whole.

Theory Application

The French conflict in Algeria offers insight into the C2 of air in small wars. As discussed above, they used a decentralized model to support ground units with airpower split into geographical areas. This section of the monograph uses Kometer's six parts of the general formula for C2 of air. The six parts focus the study to allow the application of the Competing Values Theory of Organizational Effectiveness. To begin, Kometer's formula is plotted on the visual representation of the Competing Values Theory.

⁷⁹Gougeon, 9.

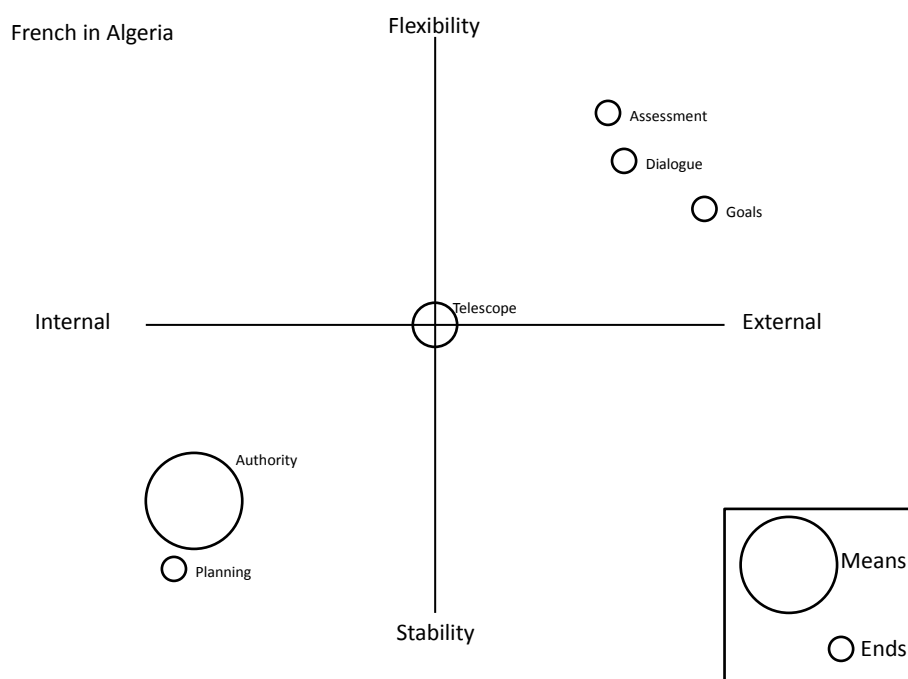


Figure 2. Spatial Model of Effectiveness for French in Algeria

Source: Created by author, adapted from Robert E. Quinn and John Rohrbaugh, "A Spatial Model of Effectiveness Criteria: Towards a Competing Values Approach to Organizational Analysis," *Management Science* 29, no. 3 (March 1983): 363-377.

Figure 2 plots the six parts of Kometer's general formula onto the Competing Values Spatial Model of Effectiveness for the French in Algeria. Kometer states that a commander at any level should set the goals for the organization under his command.⁸⁰ In the French conflict in Algeria, the commander focused the goals of the organization on rapid response to ground actions by dividing the airpower into the G.A.T.A.C's. The goals of organization were to allow flexibility in action at the expense of the stability of air operations in the overall conflict. Individual geographic sector commanders could set their own goals to best accommodate the environment in the sector. Also, the focus on maximum response to ground operations projects an external goal

⁸⁰Kometer, 276.

emphasis. The ends of support to ground operations were prioritized over the means of airpower efficiency.

On Kometer's second part of the general formula, planning, the French empowered individual sector commanders to conduct planning. A commander should empower subordinates to come up with plans for their respective parts.⁸¹ The authority, structure, and coordination were stable in day to day operations by the French due to this planning at the local level. The planning empowerment of individual sector commanders shows an internal focus because individual sector commanders could adjust operations to their own likes and dislikes. Individual commanders were empowered with the means to conduct air operations in order to achieve the ends.

The third part of the general formula is dialogue, which should be bruising to critique and correct subordinates' plans. In Algeria, the French had little dialogue between the air commander responsible for entire conflict and the individual sector commanders. The dialogue with higher headquarters was flexible due to a lack of centralized control and relied on individual initiative. Instead, the dialogue occurred between the air and ground commanders in each sector. The ends based dialogue focused on the objective of the organization to support ground operations in the individual sector.

Authority, according to Kometer, should be defined through the command relationships and the commander should provide situational awareness in the places where internal organizations need to coordinate.⁸² The French had a stable authority structure in which coordination happened at the lowest level. This authority was also internally focused because individual sector commanders could adjust operations to their individual like and dislikes instead of a focus on the overall air war. Authority is the only part of the Kometer's general formula in

⁸¹Kometer, 276.

⁸²Ibid., 277.

which the French emphasized means over ends. The authority of the French aircraft in sectors meant that commanders conducted planning at the lowest levels controlled the means through which the plans obtained sector objectives.

The commander's telescope is a metaphor for the ability to track actions and hold subordinates accountable.⁸³ This is problematic for the French in Algeria because there is little evidence of the overall conflict air commander tracking actions of subordinates. Therefore, the telescope plot on the spatial model remains neutral. Similarly, Kometer's final part, assessment, is difficult to determine. Commanders should assess the effectiveness of the actions and the need for a change in plans.⁸⁴ The French air C2 structure would make assessment of air operations difficult for the overall conflict due to competing objectives in each individual sector. In order to assess, the flexibility of individual initiative and an external focus on the ultimate goal of supporting ground operations must be trusted as the final goal of the organizations. This leads to an ends based focus when the French commander conducted assessments.

Relevance

This section of the monograph looks at the data plotted to find trends and indicators of the effectiveness of the French C2 structure. As stated before, the Spatial Model of Effectiveness Criteria does not show effectiveness as a single value. Instead, it looks at which concepts are most central to the organization in order to grasp an understanding of the value choices that the organization made. It is a comprehensive and balanced set of indicators. The plots of the French model emphasize two areas. The first is the internal and stable in the lower left side of the graph followed by the external and flexible portion in the upper right.

⁸³Kometer, 277.

⁸⁴Ibid.

The matrix provided by Quinn and Rohrbaugh's Spatial Model shows that when the French C2 structures appear on graph, the authority and planning aspects of Kometer's general formula are grouped into the stability and internal portions. An organization creates depth in the command relationships by defining authority. It is the way a leader of an organization projects power down from the top to the subordinate leaders in an organization. Similarly, when a command empowers subordinates to come up with plans for their respective parts, the leader or commander gives power down the command chain to subordinates. These values emphasize empowerment to the subordinate commanders. The commanders of each section had the ability to be both plan and oversee the execution of air operations in their sectors. When projecting empowerment downward, the French emphasized internal stability.

On the opposite side of the graph, the French emphasized flexibility and an external outlook with the values of goals, dialogue, and assessment. Two of these parts of the general formula, goals and assessment, speak to accountability within an organization and dialogue is used for both empowerment and accountability. The goals of the organization allow the commander to give expectations to his subordinates and eventually hold them accountable. The dialogue critiques and corrects the subordinates' plans, and the assessment allows the commander to check subordinates execution. Dialogue, according to Kometer, should be in both directions. The dialogue should be bruising to critique and correct, but also should make the plans the subordinate's own. The assessment of subordinate's actions, once complete, ties it all together and completes the loop of accountability. The three values of goals, dialogue, and assessment are the way the leader of an organization exerts power downward. When holding subordinate commanders accountable, the French emphasized flexibility and an external approach.

The French air C2 system with stable, internal empowerment and flexible, external accountability could be attributed to the types of aircraft the French chose to use in Algeria. The small and light aircraft did not have the range or speed to easily traverse multiple geographic sectors. Therefore, the overall conflict air commander had little ability to flex aircraft from one

sector to the other. If a large ground operation was taking place in one sector, aircraft from other sectors could not easily be moved to support it. Since subordinate commanders had little ability to affect other sectors, they needed a stable and internally focused planning environment in which the subordinates had the authority to execute as they saw fit. When holding subordinate commanders accountable, the French needed a flexible and external focus. The goals of the organization had to be discussed and assessed with an external awareness of the need to support ground commanders in the specific section. Hence, flexibility in the accountability process was needed to allow each subordinate commander to run operations as he saw fit. This required great trust in subordinate commanders.

It is important to note that two things are especially unique about the French military operating in Algeria. First, General Maurice Challe, Military Commander in Algeria, was a French Air Force officer. An Air Force officer in the highest command position in theater would certainly change the trust relationships within his command. An Army officer might have been less likely to leave the planning and authority for execution of air operations to individual subordinate commanders. An individual less familiar with the intricacies of airpower may have been just as concerned with the means of execution, which he would be less familiar with, than the ends emphasis that the Spatial Model shows for the French.

Finally, the French gained a completely separate Air Force in 1922.⁸⁵ When first established, the French Air Force divided itself into two divisions. The First Air Division was a general reserve formation consisting of bomber and pursuit aircraft capable of acting instantly in case of need. The Second Air Division, which was much larger, was dedicated solely to cooperation with the ground forces.⁸⁶ The rapid ability to redistribute forces was an important

⁸⁵Christienne and Lissarague, 219.

⁸⁶Ibid.

part of the organization in order to allow the First Air Division increased material as the need arose. Much like every other country developing an air force at this time, ministers of war and of the navy saw aviation as a weapon at the service of other branches.⁸⁷ During World War II, the Free French Air Force had great success, and the French saw that a unified air force had won the victory. However, they also saw the extraordinary potential of air action in support of ground troops. In the post World War II period, while the USAF was in its infancy, the French Air Force's role was solidified. In 1947, the French Air Force reorganized their forces in Indochina into geographic divisions, much as they would do in Algeria. Once again, with 24 hours notice, the command could concentrate all aviation to one or more of the geographic groupings.⁸⁸ In both Indochina and Algeria, the French Air Force adapted to the Army's operational staff. The French Air Force had long been established and did not need to continue to justify its own existence. The French Air Force and Army had forty years and a world war to establish trust. Challe trusted the sector ground commanders to use the airpower properly.

The French Air Force used a C2 model that differs greatly from the one the United States used in Vietnam. Their model allowed a stable and internal focus to the organization when the commander empowered his subordinates, but allowed a flexible and external focus when the organization held subordinate commanders accountable. The next chapter focuses on the United States experience in Vietnam and how the drastically different C2 structure emphasized drastically different values.

Air Command and Control in Vietnam

This section looks at the background of the small war the United States fought in Vietnam as well as the C2 relationships. As the war progressed, the air C2 relationships changed

⁸⁷Christienne and Lissarague, 237.

⁸⁸Ibid., 452.

drastically due to both the evolution of the conflict, and the outside intervention of political leaders in the United States. Interservice rivalry also played a large role in both the conduct of the war and the way the organizations executed planning, directing, coordinating, and managing air forces and air operations towards the accomplishment of objectives.

Background

Although the United States and France entered the conflicts described in this monograph for different reasons, a look at the background of the conflicts offers insight into why certain types of aircraft were used and how the use of those aircraft changed. This section will not address the reasons for the United States involvement in Vietnam and the initial use of ground troops. Instead, it concentrates on the initial deployment, buildup, and evolution of air C2 in Vietnam.⁸⁹

Prior to the French leaving Vietnam in 1954, the United States supported the effort by providing aircraft and other equipment to French forces.⁹⁰ With the French withdrawal from Vietnam, the United States continued to increase funding and training to the South Vietnamese (SVN) government. This included aircraft as well as pilot training in the United States. As President Kennedy and Defense Secretary Robert McNamara called for a reorientation of the United States military towards a small wars mindset, Air Force leaders responded rapidly with the activation of a new type of squadron. This squadron, and those that followed, provided training to USAF crews in suitable aircraft and prepared to train indigenous forces to use them. The eventual goal was to hand the aircraft over to the SVN government to fight their own war. Although the USAF was the first service to respond to Kennedy's request, it did not include any doctrinal or

⁸⁹For a comprehensive text on the Vietnam War see George Herring, *America's Longest War: The United States and Vietnam, 1950-1975*, 4th ed. (New York: McGraw Hill, 2001).

⁹⁰Corum and Johnson, 158.

major force structure changes. The move was primarily a self-serving act designed to prevent the Army from infringing on the Air Force's fixed-wing force.⁹¹

The USAF's concerns about fixed-wing army aviation began in the early 1960s when the Army began to look into the O/AV-1 Mohawk for surveillance and close support.⁹² As the Vietnam War progressed, so did the Army's thirst for direct support fixed wing aircraft, much to the chagrin of Air Force leadership. The Army tested aircraft such as the T-28, T-37, and A-4 to support those roles. The Marine Corps, also in need of a similar aircraft, entered an association with the Army to develop a surveillance aircraft. The Marine Corps insisted the aircraft be lightly armed with machine guns and weapons hard points. When the Marine Corps left the program due to funding battles with the Navy, the Army dropped the O/AV-1's armament capability but it was left with an aircraft that could be easily armed to provide CAS. Air Force leadership felt great animosity toward this program.⁹³

General Curtis LeMay, Chief of Staff of the Air Force in 1961, issued the order to establish a special command designed to aid in the training of indigenous forces. LeMay's intention was certainly debatable and some say he regarded the mission as merely a passing fad.⁹⁴ It is the opinion of many airpower historians that LeMay was most concerned with the Army's development of light aircraft because he felt the Air Force should be the only airpower branch of

⁹¹Corum and Johnson, 238.

⁹²Ian Horwood, *Interservice Rivalry in Vietnam* (Fort Leavenworth, KS: Combat Studies Institute, 2006), 103.

⁹³Ibid., 106.

⁹⁴Edward B. Westermann, "Relegated to the Backseat: Farm Gate and the Failure of the US Air Advisory Effort in South Vietnam, 1961-1963," in *Military Advising and Assistance: From Mercenaries to Privatization 1815-2007*, ed. Donald J. Stoker (London: Routledge, 2008), 127.

the services.⁹⁵ In the early parts of the Vietnam War, the Army had 199 aircraft in service while the Air Force had only 61. Additionally, the Air Force only assigned three generals to Vietnam compared to eight in the Army.⁹⁶ General LeMay was very concerned with the Air Force's position in relation to the Army and set up a new squadron to level the balance of power. The unit tasked with establishing initial cadre was the 4400th Combat Crew Training Squadron based at Eglin Air Force Base, Florida. With very little guidance, the unit received an array of World War II aircraft including the T-28 Trojan.⁹⁷ Although the aircraft's ability to operate low and slow turned out to be an advantage, the USAF used them because they were inexpensive aircraft that they had on hand. Although, on the surface, the 4400th Combat Crew Training Squadron's mission was to train VNAF pilots, in actuality the American pilots would have the direct combat role as the war progressed.

When the 4400th arrived in Bien Hoa in November 1961, they began operating under the classified designation of Farm Gate.⁹⁸ From the start, the command relationship proved very difficult. The commander of Farm Gate received orders directly from Curtis LeMay himself but a variety of other chains of command and government agencies also provided information and direction.⁹⁹ The 4400th did not receive actual orders until December of 1961. When finally received, they included a long list of offensive oriented tasks. The 4400th was to deny Viet Cong supply routes and concentrations in South Vietnam and establish armed air patrols of SVN

⁹⁵Westermann finds Curtis LeMay to be most at fault, while Corum and Johnson blame the USAF as a whole.

⁹⁶Donald J. Mrozek, *Airpower and the Ground War in Vietnam* (Maxwell AFB, AL: Air University Press, 1988), 27.

⁹⁷Westermann, 128.

⁹⁸Ibid., 130.

⁹⁹Ibid.

borders and shorelines, to include river, highways, rail, and trail traffic suppression, day and night. They were also to seek out and destroy and disrupt the Viet Cong command organization and communist airlift efforts into South Vietnam. Finally, Farm Gate aircraft were to develop and implement an aggressive program of offensive air operations, to complement and to set the pattern for Vietnamese Air Force operations, to neutralize all manifestations of communist actions and strengths in South Vietnam.¹⁰⁰ By looking at the objectives in the above order, there is very little to no “advising” in the mission statement. From the beginning, this mission was subordinate in both the eyes of the pilots and the unit’s leadership.¹⁰¹

By the end of 1961, Farm Gate’s list of aircraft grew to include the A-1H (AD-6), bringing the total number of fixed wing aircraft to about 100.¹⁰² Because the pilots did not speak the native Vietnamese language, the training and advisory role lagged. However, the American pilots’ involvement in close air support for the Vietnamese Army as well as interdiction on the Ho Chi Minh Trail grew significantly. By using a C-47 as a flare ship, the American pilots were able to effectively attack Viet Cong supply lines at night and stop the movement of enemy under the cover of darkness. In order to maintain the cover of training and advising for Farm Gate, VNAF observers were required to be in the cockpits of the two seat T-28s. By 1963, the Farm Gate unit was no longer a group of specially trained pilots executing special tactics. The Farm Gate aircraft were conducting conventional missions with USAF crews. The unit repainted aircraft with American markings and the “Americanization” of the air effort in Vietnam was complete.¹⁰³

¹⁰⁰Westermann, 131.

¹⁰¹Ibid.

¹⁰²Ibid.

¹⁰³Corum and Johnson, 262.

Two additional developments during 1963 also changed the picture of airpower in US operations in Vietnam. First, the antiaircraft capability of the Viet Cong increased immensely. On 24 November 1963, twenty four American and SVN aircraft were damaged and five destroyed by the Viet Cong, the largest number in the war to that point.¹⁰⁴ In the last three months of 1963, antiaircraft fire hit 124 aircraft and the caliber of antiaircraft artillery continued to increase up to .50 caliber weapons. Viet Cong carried .50 caliber weapons mounted on rubber wheels and as two man teams. The teams set up at large defensive positions or along borders where they could easily be moved to safety if attacked.¹⁰⁵ Most of the hits occurred while aircraft operated below 1,000 feet.¹⁰⁶ Given the increased threat, the USAF gave the remaining T-28s to the South Vietnamese Air Force and the A-1 took over as the primary close air support aircraft in theater. The second development was the deterioration of the old training aircraft. Since they were World War II vintage aircraft with thousands of hours on them, the T-28 and B-26 (later designated A-26) wings began to fall off in flight.¹⁰⁷ This left the A-1 and later refurbished A-26s as the remaining USAF aircraft in theater. Since the guise of VNAF advising and training had been abandoned, modern jet-powered aircraft were brought into theater at a rapid pace in 1964.

By 1964, the Joint Chiefs of Staff agreed that the United States should take over the fighting in Vietnam, but did not agree on how the United States should intervene. As USAF Chief of Staff, LeMay argued that a minimum number of troops be deployed to South Vietnam to secure main airfields and other strategic areas. Once ground troops had secured infrastructure, he

¹⁰⁴Corum and Johnson, 262.

¹⁰⁵Micheal Lee Lenning and Dan Cragg, *Inside the VC and the NVA* (College Station, TX: Texas A&M University Press, 1992), 107.

¹⁰⁶Jacob Van Staaveren, "USAF Plans and Policies in South Vietnam 1961-1963" (Study, USAF Historical Division Liaison Office, June 1965 [Top Secret], declassified 11 July 1991), 38.

¹⁰⁷Corum and Johnson, 266.

argued for an air offensive against North Vietnamese strategic targets that would eventually end the war.¹⁰⁸ The Army Chief of Staff, General Earle G. Wheeler, recommended that US troops take on a combat role with the air campaign directed at the border of South Vietnam, but not into the interior of North Vietnam. Although the Chief of Naval Operations and the Commander in Chief of the Pacific agreed with LeMay, McNamara sided with the Army's view.¹⁰⁹ The Gulf of Tonkin incident gave LeMay further reason to bolster his argument.

In early August 1964, North Vietnamese torpedo boats attack two U.S. destroyers in the Gulf of Tonkin. In retaliation, the Joint Chiefs decided on limited attacks to demonstrate that continued aggressive attacks by North Vietnam would lead to serious consequences.¹¹⁰ The graduated escalation continued until the bombing halt in 1968. Leaders in Washington, D.C. selected targets with an orientation toward achieving some particular effect upon the ground war in South Vietnam. Leaders and planners made little effort toward shocking the North Vietnamese leaders or disrupting their ability to generate a war machine with strategic attacks. By late 1964, North Vietnam stepped up attacks on airfields throughout South Vietnam while also increasing Viet Cong and North Vietnamese forces in South Vietnam. A change had to be made if South Vietnam was going to stay out of communist control.¹¹¹ The Joint Chiefs recommended to President Johnson that a series of strikes be conducted into North Vietnam to retaliate against increased North Vietnamese aggressions. The President, Secretary of State, and Secretary of

¹⁰⁸Momyer, 13.

¹⁰⁹Ibid., 14.

¹¹⁰Ibid., 15.

¹¹¹John J. Lane, *Command and Control and Communications Structures in Southeast Asia* (Maxwell AFB, AL: Air University Press, 1981), 39.

Defense continued to see the primary role of airpower as support to ground forces and declined.¹¹²

The 3,500 Marines sent to defend Da Nang in March of 1965 were the first US ground combat units deployed to Vietnam and the numbers of US ground forces increased rapidly throughout the summer of 1965. Along with ground combat power, the airpower in the region increased enough to allow any desired level of escalation.¹¹³ Senior USAF and Navy leaders continued to advocate for aggressive strategic attacks against North Vietnam, and were continually denied. Secretary McNamara believed the conflict was still an insurrection to be dealt with in South Vietnam, “a very, very limited political objective.”¹¹⁴ But the reality in theater would force a strategy change at a slow pace.

The Tet Offensive in early 1968 allowed another opportunity for the USAF leaders in theater to advocate for an updated strategy with regard to attacks into North Vietnam. Instead President Johnson elected to stop all bombing of North Vietnam to “de-escalate the conflict” to “bring about a reduction in the level of violence that exists.”¹¹⁵ It was not until President Richard Nixon took office in 1969 that any significant strategy change was made. By this time, popular support for the war in Vietnam was lost and the President’s position was that the security of troops withdrawing from South Vietnam demanded protective airstrikes.¹¹⁶ From 1969 to 1972, the strategic attacks into North Vietnam continued to escalate, culminating in Linebacker II. President Nixon authorized an 11-day air campaign concentrating the use of “all forms of

¹¹²Momyer, 18.

¹¹³Ibid., 21.

¹¹⁴Ibid., 22.

¹¹⁵Ibid., 27.

¹¹⁶Ibid., 31.

airpower to strike at the vital power centers, causing maximum disruption in the economic, military, and political life of the country.”¹¹⁷ When finally unrestricted, the strategy persuaded the North Vietnamese that “aggression could not be sustained in the presence of unrestricted US airpower.”¹¹⁸

Just as the airpower strategy evolved as the Vietnam War progressed, so did the C2 structures. US involvement began in 1950 with Military Advisory Group (MAG). This designation was changed to the Military Assistance Advisory Group (MAAG) in 1955 when the French gave autonomy to Vietnamese armed forces and therefore allowed the US to provide direct assistance.¹¹⁹ Farm Gate aircraft operated under the MAAG as their mission increased from training VNAF to providing close air support to South Vietnamese units. In November of 1961, 13th Air Force in the Philippines activated an advanced echelon (ADVON) headquarters of its 2nd Air Division on the outskirts of Saigon. The ADVON designation was to insure the policy of training and not combat operations was held. Although the 2nd Air Division ADVON was operating in Vietnam, they were not technically the air section of the MAAG.¹²⁰ The ADVON was an element of 13th Air Force, but 13th Air Force had no responsibility in Vietnam. Still, the commander of the ADVON reported activities of his assigned forces to the MAAG chief. Change and friction continued as the war progressed.

In February of 1962, the Military Assistance Command Vietnam (MACV) replaced the MAAG as a sub-unified command under the Commander in Chief of the Pacific (CINCPAC). The composition of the MACV staff was weighted heavily towards ground officers even though

¹¹⁷Momyer, 33.

¹¹⁸Ibid., 34.

¹¹⁹Lane, 40.

¹²⁰Ibid., 46.

airpower was fundamental to all combat operations.¹²¹ At the same time, Pacific Air Forces (PACAF) believed the air command structure should provide direct control of all aircraft in Southeast Asia to PACAF headquarters through 13th Air Force. The only air forces assigned to MACV should be the ones that MACV required for in-country use. Consequently, most USAF units assigned to Southeast Asia would be under 13th Air Force. If MACV needed more airpower than at its disposal, all or parts of 13th Air Force could be assigned to MACV for a specified period of time.¹²² Additionally, the President established Joint Task Force (JTF-116) in Thailand to address concerns regarding Laos. By early 1962, the USAF units in South Vietnam were under 2nd Air Division ADVON of MACV and units in Thailand were under 13th Air Force, except for those recently deployed under JTF-116. In October of 1962 2nd Air Division ADVON was converted to the 2nd Air Division with JTF-116 under its command.¹²³

Although the above arrangement was difficult, the duties of the 2nd Air Division Commander made the arrangement easier. He was expected to perform two roles; the air component commander for MACV, and the forward commander for 13th Air Force. Although the 2nd Air Division commander was responsible for most air units in Southeast Asia, he only answered to the MACV commander when operations involved the air units assigned to MACV. Throughout this command confusion, interservice rivalry was also prevalent. Air Force leaders, namely LeMay, argued that an airman in the position of deputy commander of MACV would lead to a better understanding and employment of airpower as the war expanded.¹²⁴ The commander of

¹²¹Lane, 41.

¹²²Momyer, 71.

¹²³Lane, 46.

¹²⁴Momyer, 74. This was primarily due to LeMay's experience in World War II when the General Tedder was deputy to General Eisenhower in the Supreme Headquarters Allied Expeditionary Force

MACV, General Paul Harkins, disagreed and the deputy commander remained an Army officer. In mid-1965, General William Westmoreland, the new MACV commander, compromised by allowing the 2nd Division Commander to become the Deputy for Air Operations.¹²⁵

As 2nd Air Division continued to grow in size and responsibility, it soon outgrew the Division nomenclature. On 14 March 1966, 2nd Air Division became 7th Air Force.¹²⁶ Additionally, a single airman occupied the position of Deputy Commander for 7th Air Force and Deputy Commander for 13th Air Force. This Deputy Commander had logistical and administrative responsibility for all units located in Thailand.¹²⁷ The Deputy Commander, 7th/13th Air Force, was responsible for dealing with Ambassadors in both Thailand and Laos, which was a difficult relationship. In Thailand, the Ambassador had no control over operations, but had to keep the Thai government informed on the air war and ask for facilities to conduct it. In Laos, the Ambassador was responsible for all United States military activities. The embassy conducted detailed control of all air operations within the country to include the approval or disapproval of targets.¹²⁸

¹²⁵Momyer, 81.

¹²⁶Ibid., 83.

¹²⁷Momyer, 83. This arrangement was to satisfy the Thai government's request for a commander based in Thailand responsible for all units in the country.

¹²⁸Lane, 59.

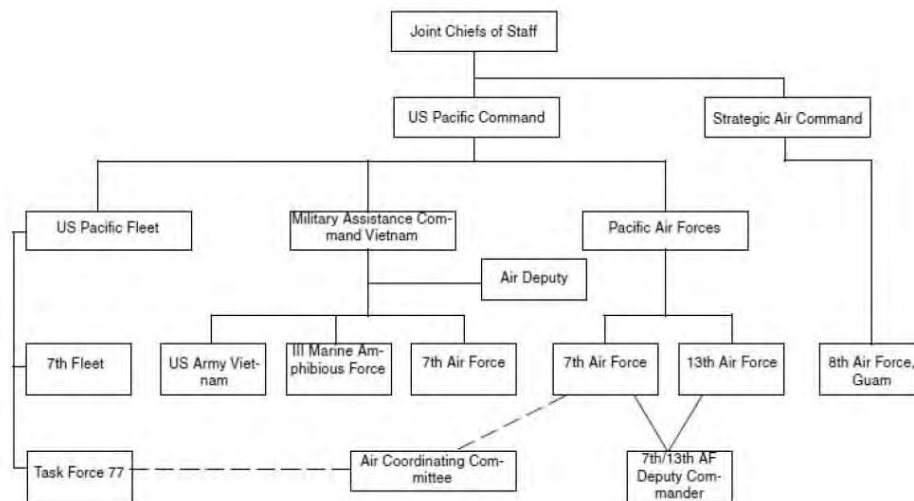


Figure 3. Lines of Command 1966-72

Source: General William W. Momyer, USAF, *Air Power in Three Wars* (Washington, DC: Government Printing Office, 1986), 127.

The final C2 issue for the Vietnam War discussed in this monograph is the control of Navy and bomber aircraft striking North Vietnam. A formal command arrange was in place for South Vietnam and Laos, but the question of operations in North Vietnam remained unsettled until 1965. The Air Force argued that all carrier air should be under the control of PACAF. As might be expected, the Commander of the Pacific Fleet disagreed and argued that naval airpower was an inherent part of the fleet.¹²⁹ A compromise was made by dividing North Vietnam into a series of route packages. The United States Navy would control route packages II, III, IV, and VIB with the Air Force responsible for route packages I, V, and VI A.

¹²⁹Momyer, 90.

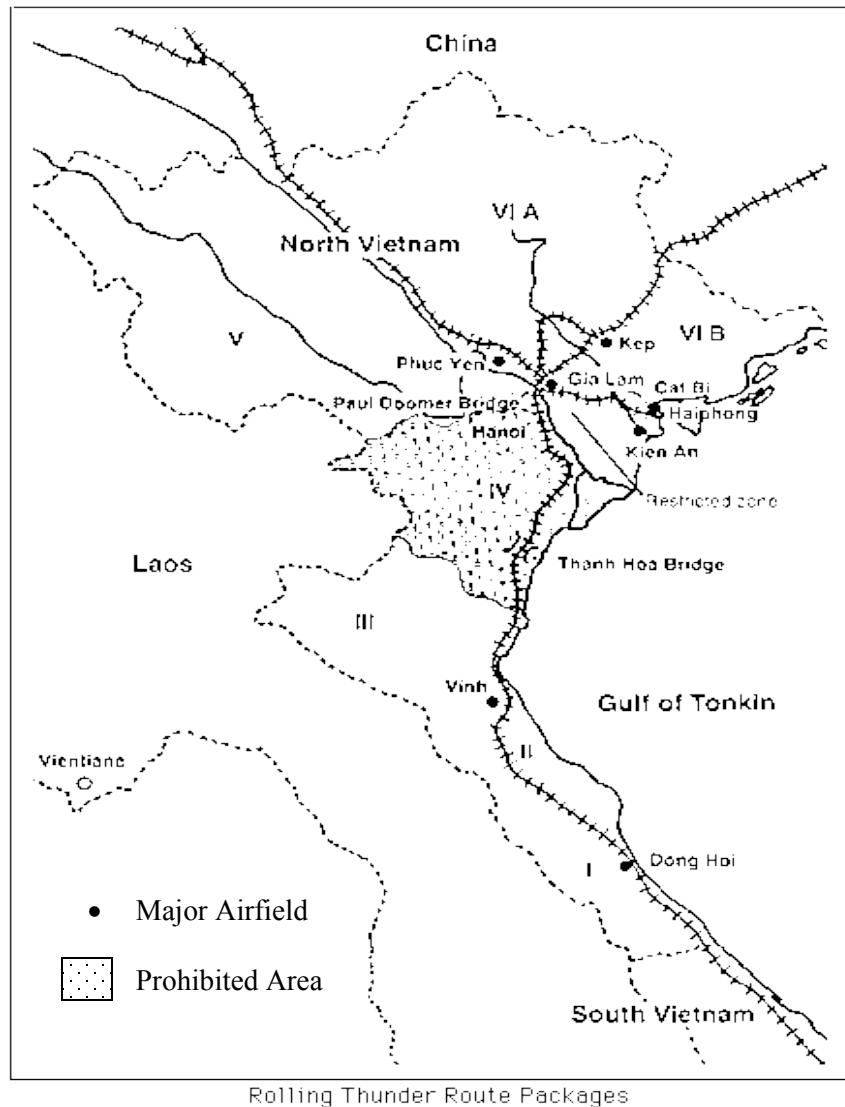


Figure 4. Route Package Map

Source: Department of the Navy, *By Sea, Air and Land* (Washington, DC), <http://www.history.navy.mil/seairland/chap3.htm> (accessed 7 September 2011).

Finally, control of bomber aircraft was a continuing problem throughout the war. The USAF did not want bombers to be under the operational control of MACV or the MACV Air Deputy. Air Force leaders felt the B-52's primary mission was nuclear attack, and did not want them under any control other than Strategic Air Command (SAC). SAC was a specified command

reporting directly to the Joint Chiefs of Staff.¹³⁰ If MACV, PACAF, or the Commander in Chief of the Pacific had control of those bombers, valuable time could be lost in a nuclear emergency. In order to bring the B-52s into theater, and intricate coordination process began for mission and target approval. SAC established a liaison in MACV headquarters, but dealt primarily with 8th Air Force headquarters in Guam. Military commanders divided responsibilities for targeting based on the Route Packages in which the targets were located. For Route Packages II, III, and IV, TF-77 nominated B-52 targets through the 7th Fleet and Pacific Fleet to Pacific Command. For Route Package I, 7th Air Force nominated targets through MACV to Pacific Command. The Commander in Chief of the Pacific then made the final determination of priorities and sent the list to The Joint Chiefs of Staff. All other targets were nominated to the Joint Chiefs through SAC, who, as a specified command, had a direct line of communication to the Joint Chiefs. The process was very slow and did not meet the time requirements needed in war.¹³¹ Although the arrangement worked and the units coordinated, they never had a unity of effort.

The C2 structures used by the United States in Vietnam were complex and almost constantly evolving. Multiple headquarters conducted parallel planning in a war zone with scarce resources. If an important decision was to be made, the coordinating activities and debate within multiple organizations took time that is not available in a combat situation. Employment of airpower was fragmented and degraded in the ten years the air war progressed.¹³²

Theory Application

The United States conflict in Vietnam offers insight into the C2 of air in small wars. As discussed above, the air operations in Vietnam changed drastically as the war progressed. This

¹³⁰Momyer, 99.

¹³¹Lane, 65.

¹³²Ibid., 71.

section uses the C2 structures in place in 1972 as the war ended. Kometer's six parts of the general formula for command of airpower are plotted on the Spatial Model of Effectiveness criteria from Quinn and Rohrbaugh to analyze the organization.

To begin, Kometer's formula is plotted on the visual representation of the Competing Values Theory.

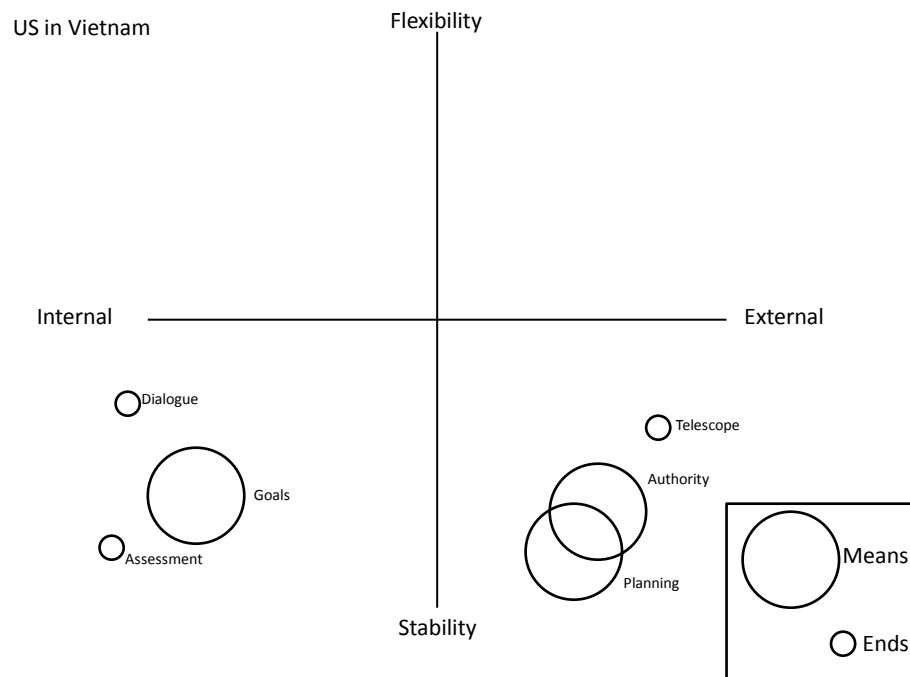


Figure 5. Spatial Model of Effectiveness for United States in Vietnam

Source: Created by author, adapted from Robert E. Quinn and John Rohrbaugh, "A Spatial Model of Effectiveness Criteria: Towards a Competing Values Approach to Organizational Analysis," *Management Science* 29, no. 3 (March 1983): 363-377.

Kometer's first part of the general formula for a commander is to set the goals for the organizations that are to be unified under his command.¹³³ The goals of the air forces in Vietnam were primarily directed at stability instead of flexibility in the battle. The complex C2 structures with multiple overlapping areas left little room for flexible goal setting. Similarly, the goals were internally focused because they were forced to take into account the internal likes and dislikes of each individual service and subordinate commander. The aircraft operating in the Navy route packages had different organizational goals than those operating in other areas, and those goals were set by the internal commander for air in the region. Also, instead of focusing the goals on the end state of the overall conflict, goals were primarily directed towards the means, such as the type and numbers of B-52 missions used to achieve political objectives.

Political and military leaders from many levels of the chains of command were heavily involved in planning for air operations in Vietnam. The multiple levels of approval left little room for flexibility in the air operations. Since airpower was often planned from outside the organization, internal harmony was compromised for external objectives in planning. Also, the plans were generated based on aircraft types and munitions instead of end states showing an emphasis on the means values. Kometer's general formula also calls for a bruising, running dialogue with subordinates to critique and correct subordinate's plans.¹³⁴ In Vietnam, the dialogue was primarily between the highest levels of command in Washington and the air commanders trying to run the war. Although the ends of stopping North Vietnamese aggression consumed dialogue, the target selection and internal harmony of organizations own desires shows an emphasis on the stability and internal values.

¹³³Kometer, 276.

¹³⁴Ibid., 277.

Authority for the conduct of air operations in Vietnam spanned multiple commands from both inside the USAF and outside all the way to the President of the United States. Once again, the lack of a central authority left little room for a flexible air campaign. Leadership sacrificed internal harmony in order to maintain authority over the operation of the air war and emphasized the means of aircraft and sortie types instead of the ends that those sorties were to produce. Similarly, the commander's telescope in this case was from the highest levels of the command authority back in Washington. Once again, the lack of authority of the subordinate commanders left little room for flexibility and compromised internal harmony. In this case, the telescope was focused on the ends of stopping North Vietnamese aggression, instead of subordinate commanders' use of the means available.

Assessment, according to Kometer, should focus on the effectiveness of action and the need for a change in plans.¹³⁵ Assessment in the Vietnam War placed little emphasis on diversity, individual initiative, and organizational adaptability.¹³⁶ Instead, it focused on airpower's ability to stop North Vietnamese aggression, a purely ends based approach. The assessment was based on the internal likes and dislikes of the upper echelons of political and military leadership in the United States.

Relevance

As with the relevance section in the French chapter, the elements of Kometer's general formula are categorized into empowerment values and accountability values. The leader of an organization empowers subordinates with planning and authority while holding subordinates accountable by setting goals, using the "commander's telescope" and assessment. The dialogue is a neutral element and can be used for both empowerment and accountability. This section of the

¹³⁵Kometer, 277.

¹³⁶Quinn, 370.

monograph looks at the data plotted to find trends and indicators of the effectiveness of the United States' C2 structure. As stated before, the Spatial Model of Effectiveness Criteria does not show effectiveness as a single value. Instead, it looks at which concepts are most central to the organization in order to grasp an understanding of the value choices that the organization made.

The C2 structures of the United States in Vietnam plotted on Quinn and Rohrbaugh's Spatial Model of Effectiveness Criteria shows trends, but is not as clear as the French model from the previous chapter. The elements of empowerment, planning, and authority, are clearly located in the external and stability area of the Spatial Model. The multiple lines of command made empowerment difficult for air commanders in Vietnam. The ever changing policy toward the conduct of the war from political leaders left little room for innovation and standardized decision making. The aircraft involved in operations were under orders from 7th Air Force and 13th Air Force with various US embassies and the Central Intelligence Agency approving target lists making the C2 of the air war in Vietnam centralized in name only. The division of the country into route packages meant the same crews flew to the same route package every day bringing stability, but little creativity and insight to the subordinate units. Also, the empowerment in Vietnam had a means based emphasis. The end goals were set by higher command and subordinates were simply empowered with the means to execute.

Accountability for air operations in the Vietnam War when plotted on the Spatial Model is more problematic. The values are split between the internal and external area with all values in the stable, lower half and include both means and ends emphases. To begin, the goals that commanders needed to give to subordinates often changed with updates to political objectives. What started as a military assistance mission, hand in hand with the Vietnamese Air Force, soon turned to a conventional air war over North Vietnam. The changing political dynamic did not allow air commanders, both subordinate and up, to innovate or adapt. Instead, the goals remained internally focused on simple execution of the given mission. Commanders could not assess the overall effectiveness of airpower and were forced to look at sortie generation and weapon

effectiveness, an internal focus. Finally, the commander's telescope did not come from the operational commanders in theater, but instead it came from external leaders in Washington. These factors, the lack of focus on accountability, lead to an inability of commanders to accurately hold subordinates accountable.

The outlier on the Spatial Model of the United States in Vietnam is the commander's telescope. Kometer argues that a commander should "use people and technology to create a directed telescope to track the actions and hold subordinates accountable."¹³⁷ In Vietnam, the telescope came from multiple layers of the chain of command and also came to different conclusions. An example is the initial assessment of Operation Rolling Thunder in 1965. The attacks targeted the bridges and roadways south of the 20th parallel and all of the north's primary and secondary roads had sustained losses in capability.¹³⁸ This operation came at a great cost. From 30 April to 13 May, the United States lost five aircraft and the North Vietnamese destroyed fifteen. The assessments of the effects from these bombings varied greatly. Defense Secretary Robert McNamara believed the attacks had improved the overall military and civilian morale in South Vietnam. Commanders and analyst at Pacific Command thought Rolling Thunder had forced the enemy to divert enough resources toward rebuilding that it now depended more on Soviet and Chinese support. Finally, Pacific Air Forces operational analysts took a more sober view. They believed the enemy was skillfully adapting to the attacks and damaged areas were bypassed easily. Hanoi simply recruited additional labor to repair damage.¹³⁹ All of these ends based assessments not only disagreed on the effects of Rolling Thunder, they had different

¹³⁷Kometer, 277.

¹³⁸Jacob Van Staaveren and Air Force History and Museums Program, *Gradual Failure: The Air War Over North Vietnam, 1965-1966* (Washington, DC: MilitaryBookshop.co.uk, 2011), 128.

¹³⁹*Ibid.*, 130-131.

interpretations of what measures showed effectiveness. The commander's telescope was useless within the organization.

The C2 structure of the United States in Vietnam shows different emphases than the French when placed on the Spatial Model of Effectiveness Criteria. The elements of Kometer's general formula that empower subordinates were externally focused on stability and means. The subordinates needed the ability to plan internally in order to drive adaptation and insight into the air operations. On the other hand, subordinate accountability was internally based. A greater emphasis on flexibility could have brought higher morale and cohesion to the air effort through goal clarification and decisive planning. The next section of the monograph concludes with a comparison of the C2 structures of the French in Algeria and the United States in Vietnam to derive lessons that can be used in the current small war in Afghanistan.

Conclusion

Air operations by the French in Algeria and the United States in Vietnam provide contrasting models of C2 structures for this comparative case study. The French saw the importance of a decentralized model to maximize the support of ground troops. The United States, on the other hand, tried to centralize control of aircraft in accordance with USAF doctrine. Using Kometer's general formula for control plotted on the Spatial Model of Effectiveness Criteria from Quinn and Rohrbaugh highlights trends in the organizational emphases of the two structures. When empowering subordinates, the French formalized and structured their organization to be stable and internally focused. Accountability in the French organization was flexible and externally focused to breed adaptation, readiness, and creativity. The United States focused empowerment on stability and external means to try to achieve measurable goals. The accountability to achieve those goals was formalized and structured in a confusing manner that, although stable, led to inefficiencies.

The French model is not without its drawbacks. As stated previously, the French used primarily light attack aircraft within each sector to support ground operations without the range to affect other sectors. Because the French model emphasizes internal and stable empowerment, the French unit's operations in each sector had little situational awareness of other parts of the theater. If a major offensive was to occur in one sector, it took a great amount of coordination to mass the air assets available in theater. No central air commander existed to allow all the air assets in theater to be used in a decisive operation or in support of the main effort. Combat power was wasted in the organization due to the internal and stable emphasis of subordinate empowerment by the French.

The C2 structures of the United States in Vietnam cannot be viewed outside of the political context. C2 of air is defined in the definitions chapter as the authority over air forces as well as the execution of planning, directing, coordinating, and managing of air forces and air operations in the accomplishment of the mission. Since the war crossed political boundaries, multiple agencies were responsible for coordinating and managing the air forces. The United States State Department, through the embassies, required C2 to respect political borders at the demand of Southeast Asian leaders.¹⁴⁰ The United States Pacific Command in Hawaii was concerned with regional issues and escalating tension with China. Finally, the national leadership in Washington had to maintain concerns over deterrence in the context of the Cold War. These competing interests meant multiple layers of planning, directing, coordinating, and managing air forces and air operations. Within the political context, it is easy to see why empowerment in the United States' model favored an external and stable emphasis.

The optimum situation is similar to one in which the higher command integrates all operations on land, air, and sea as Chassin advocates, but at the same time the air control

¹⁴⁰Mrozek, 33.

headquarters are “within a few hundred miles of the battles,” as per Momyer.¹⁴¹ This could allow the best of both worlds in a small war with the most efficient use of airpower through a centralized commander and also close integration with ground operations due to proximity. In modern conflicts, the United States is operating in multiple locations throughout the Middle East, not to mention the world. With the operational reach of modern aircraft, a centralized air commander could never be within a few hundred miles of all the battles. Additionally, the technological requirements of C2 of air in the modern theater lack the portability to collocate with a moving battle.¹⁴² One solution is the air component coordination element (ACCE).

The ACCE is an organization developed as a liaison between the Joint Forces Air Component Commander and other component commanders. It was first developed prior to Operation Iraqi Freedom with teams of six to ten Airmen, directed by a Brigadier or Major General, in seven places throughout the theater. Air Force doctrine states that it ensures the Joint Task Force and component commanders get air, space, and information operations support as well as ensure the integration of that support in the other component’s plans and execution. The ACCE will not bear any responsibility of an Air Operations Center processes or sub-processes that are centrally located with the overall air commander. The missions and functions of the ACCE are specifically tailored to best address the operational objectives of the Joint Force, functional, or service component commanders.¹⁴³ The ACCE allows Airmen to work face to face

¹⁴¹Momyer, 337.

¹⁴²Lt Gen Mike Hostage, “A Seat at the Table: Beyond the Air Component Coordination Element,” *Air and Space Power Journal* (Winter 2010): 18.

¹⁴³Air University, “AFFOR Staff Training Course,” <https://augateway.maxwell.af.mil/affor/> (accessed 15 September 2011).

with surface commander to enhance their communication with the central air commander in theater.¹⁴⁴

The ACCE has been used, and continues to be in place, since its inception in 2003. In the winter of 2010, Air Component Commander for United States Central Command Lieutenant General Mike Hostage observed that the ACCE construct was wanting. Since the ACCE had no command authority and lacked a sufficient staff, it was not able to satisfy the needs of the joint forces commanders. To correct this, Hostage empowered the ACCE-Afghanistan and ACCE-Iraq in 2009 through a verbal order.¹⁴⁵ He gave the ACCE the authority to organize forces, recommend courses of action, and provide authoritative direction to the subordinate air wings.¹⁴⁶ While doing this, he also maintained the prerogative to reassign assets to meet theater-level requirements. Finally, Hostage directed his ACCE's to be prepared to execute the C2 of air assets in the event he was unable from his air operations center.¹⁴⁷

An empowered ACCE can balance the emphasis of the organization within Quinn and Rohrbaugh's Spatial Model. General Hostage's first task for the empowered ACCE is to support the joint commander to help him succeed by his measures of success. This allows the organization to have an external and flexible focus on the ends of the operation. The goals are externally assessed and with the ACCE's ability to provide authoritative direction to subordinate air wings, they could provide flexibility to support the ground commander. The second task for the ACCE is to "execute Air Force duties and conduct planning activities." Once again, the task

¹⁴⁴Kometer, 141.

¹⁴⁵Hostage, 19.

¹⁴⁶Ibid.

¹⁴⁷Maj Gen Charles W. Lyon and Lt Col Andrew B. Stone, "Right Sizing Airpower: Command and Control for the Afghanistan Counterinsurgency," *Air and Space Power Journal* (Summer 2011): 9.

emphasizes empowerment values of authority and planning. The ACCE has both empowerment and accountability with an external and flexible ends focus. While the ACCE concentrates on flexibility, external focus, and ends, the air component commander still maintains the responsibility for execution as well as the ability to task throughout the theater as he sees fit. This allows both a commander's telescope as well as an internal, stable, and means based emphasis from the highest air command.

The small wars fought by the French in Algeria and the United States in Vietnam provide lessons for the United States military to use today. Although neither France nor the United States met their strategic objectives, their C2 models show contrasting examples. The French model allowed air commanders to concentrate solely on the needs of ground commanders in their geographic area at the expense of the ability to mass airpower when needed. Commanders in Vietnam required a system that catered to the political environment in Southeast Asia and therefore the doctrine of centralized control and decentralized execution suffered. In order to strike a balance, the USAF developed the ACCE to allow centralized control of airpower while still addressing the needs of geographic ground commanders. As the ACCE continues to evolve, leaders must remember the lessons of Vietnam and Algeria to insure they make the best use of airpower.

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