AMERICA'S CONDITIONAL ADVANTAGE:

AIRPOWER, COUNTERINSURGENCY, AND THE THEORY OF JOHN

WARDEN


BY

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14. ABSTRACT

This study is a theoretical and historical exploration of the role and relevance of airpower in counterinsurgency (COIN). Despite an overwhelming material advantage in airpower and the popular belief that this provides America with an inherently beneficial warfighting asymmetry, the US struggles to realize the full value of airpower in COIN. The author proposes that airpower provides the US with a conditional advantage that must be deliberately unlocked through strategic deliberation. The author further proposes that a distinct theory of airpower for COIN is needed to foster and guide strategy formulation in order to optimize the application of airpower in this growing mission area. As a first step in developing this proposed theory, the author applies an existing airpower theory, Colonel John Wardens Enemy as a System, to three distinct historical cases in search of meaningful patterns. After conditioning Wardens theory to account for the unique attributes of insurgent organizations, this study applies an analytical framework based on Enemy as a System in examining airpower operations in the French-Algerian War, the Vietnam War, and the Soviet-Afghan War. In each case, the framework examines how airpower was applied to key vulnerabilities within the insurgent organizational system, how such application impacted enemy behavior, and the overall relationship between the character of airpower operations and strategic outcomes. The findings derived from this analysis demonstrate that Wardens theory (1) unlocks the conditional advantage of airpower in COIN by explaining and guiding airpower strategy; (2) demonstrates how COIN requires a fundamentally different airpower approach than Major Combat Operations; and (3) shows the grave risks of airpower application in COIN absent a deliberate strategy. In each of the three cases examined, counterinsurgents applied airpower in ways that failed to account for the realities of the insurgent organizational system and were insensitive to both the degree of immersion of the enemy within the local population and the critical need to earn population support. As a result, airpower operations were inordinately physical in their approach to a predominantly non-physical phenomenon, and were not properly shaped to support the goal of gaining and maintaining popular allegiance and legitimacy. The author draws clear links between these strategic missteps and the defeat of three established powers, each of which undertook COIN with an overwhelming material advantage in airpower but could not translate it into a battlefield advantage. In the closing chapter, the author demonstrates that airpower, when not properly shaped by strategic deliberation, can actually serve as a disadvantage to those who possess it asymmetrically. The author proposes that by applying a theoretical template such as Enemy as a System to the shaping of airpower in COIN, the US can avoid incurring this airpower penalty and optimize the role and relevance of airpower in defeating insurgent organizations. Organizational and policy recommendations accompany this finding.

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APPROVAL

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The conclusions and opinions expressed in this document are those of the author. They do not reflect the official position of the US Government, Department of Defense, the United States Air Force, or Air University.

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## ACKNOWLEDGEMENTS

ABSTRACT

This study is a theoretical and historical exploration of the role and relevance of airpower in counterinsurgency (COIN).  Despite an overwhelming material advantage in airpower and the popular belief that this provides America with an inherently beneficial warfighting asymmetry, the US struggles to realize the full value of airpower in COIN.  The author proposes that airpower provides the US with a *conditional* advantage that must be deliberately unlocked through strategic deliberation.  The author further proposes that a distinct theory of airpower for COIN is needed to foster and guide strategy formulation in order to optimize the application of airpower in this growing mission area.  As a first step in developing this proposed theory, the author applies an existing airpower theory, Colonel John Warden's *Enemy as a System,* to three distinct historical cases in search of meaningful patterns.

After conditioning Warden's theory to account for the unique attributes of insurgent organizations, this study applies an analytical framework based on *Enemy as a System* in examining airpower operations in the French-Algerian War, the Vietnam War, and the Soviet-Afghan War.  In each case, the framework examines how airpower was applied to key vulnerabilities within the insurgent organizational system, how such application impacted enemy behavior, and the overall relationship between the character of airpower operations and strategic outcomes.  The findings derived from this analysis demonstrate that Warden's theory (1) unlocks the conditional advantage of airpower in COIN by explaining and guiding airpower strategy; (2) demonstrates how COIN requires a fundamentally different airpower approach than Major Combat Operations; and (3) shows the grave risks of airpower application in COIN absent a deliberate strategy.

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# Chapter 1

## Introduction

*It is an airman's job and duty to articulate the ways in which the unique characteristics of airpower can be brought to bear on the Joint Force Commander's objectives.*

*--Maj Gen Chuck Link*

This study is interested in the challenge of explaining and optimizing the role and relevance of airpower in the achievement of the nation's objectives, which are contemporarily associated with the conduct of counterinsurgency (COIN).  Debate concerning how best to posture and employ US military forces in COIN has compelled some to make considerable claims concerning the value of airpower in this type of fighting.  Many believe that possession of the most advanced and capable collection of air weapons in the history of the world bestows upon the US an "asymmetric advantage" over all enemies, to include insurgents.[1] This is not a new argument.  Brigadier General William Mitchell argued in his 1930 book *Skyways* that the shock and firepower available to a nation wielding airpower would make traditional fighting obsolete.[2] Before him, Giulio Douhet theorized that command of the air was a ticket to automatic victory in war.[3]  It has been recently argued by Major General Charles Dunlap that the asymmetric possession of airpower by the US translates into an inherent advantage in all forms of warfare, to include COIN.  In making this claim, Dunlap subscribes to the notion that airpower employed with impunity against an enemy who does not

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[1] Major General Charles Dunlap, "America's Asymmetric Advantage," in *Armed Forces Journal* (September 2006), http://www.armedforcesjournal.com/2006/09/2009013.
[2] William Mitchell, *Skyways* (Philadelphia, PA: J.B. Lippincott Company, 1930), 255.
[3] Giulio Douhet, trans. Dino Ferrari, *The Command of the Air* (Washington, DC: Air Force History and Museums Program, 1998), 25.

possess it leads inevitably to a favorable outcome.[4]  His prescription is simple: employ airpower, and victory is certain to follow.

Recent US experience renders this claim subject to question.  US-led coalitions fighting insurgencies in Iraq and Afghanistan have been unable to decisively conclude those wars despite overwhelming material advantage, to include sole possession of airpower.  In Afghanistan, Close Air Support (CAS) missions doubled between 2006 and 2008,[5] yet a UN report from the same period cites "worsening security conditions."[6]  If Dunlap's logic is to be believed, something doesn't add up.  The massive and increasing weight of airpower effort exercised in Afghanistan should have translated into a dominant victory over flightless insurgents.  Yet in 2009, the US was sufficiently alarmed with the general trend in Afghanistan to undertake an entirely new approach, replacing the operation's commander and adding thousands of new troops.[7]  Does this mean Dunlap is wrong?  Is airpower simply not advantageous in COIN?  That is one possible conclusion.  But alternatively, it could be that Dunlap is on to something, and that the current trend in Afghanistan is explainable partly by the failure to translate the airpower advantage he imagines into battlefield results.  In other words, airpower is not an *automatic advantage* for those who asymmetrically possess it, but a *conditional advantage* that must be deliberately nurtured and exploited.

Unlocking the conditional advantage of airpower is a matter of closing an existing intellectual gap between the promise of airpower and its utility in the varying contexts of war, to include COIN.  In his own assessment of America's "airpower advantage," strategic theorist Colin

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[4] Dunlap, "America's Asymmetric Advantage."
[5] Jim Michaels, "Airstrikes in Afghanistan Increase 31%," in *USA Today* (5 November 2008), http://www.usatoday.com/news/world/2008-11-05-afghanstrikes_N.htm.
[6] United Nations Office of the High Commissioner for Human Rights, "OHCHR in Afghanistan 2008-2009," http://www.ohchr.org/EN/Countries/AsiaRegion/Pages/AFSummary0809.aspx.
[7] Ann Scott Tyson, "Top U.S. Commander in Afghanistan is Fired," in *Washington Post* (12 May 2009), http://www.washingtonpost.com/wp-dyn/content/article/2009/05/11/AR2009051101864.html.

Gray argues that "[a]irpower's potential utility lies within a spectrum of possibilities, and is dependent on context."[8]  Gray asserts that possession and application of airpower is not enough to realize its benefits, and that unlocking the airpower advantage depends on a careful consideration of how it relates to strategic ends and contextual variables.  Accordingly, he calls for "rigorous application of strategic discipline to all airpower activity."[9]  In his view, airmen need to *think* more about *how* airpower can fulfill roles and attain relevance across varying strategic situations rather than blithely assuming an advantage based on material superiority.  Gray concludes the best way to encourage such strategic discipline is with "a coherent *theory* of employment for all of airpower's capabilities, not only the kinetic" (emphasis added).[10]  In his estimation, the degree of advantage achievable by the US in future warfare depends greatly upon the development of a theory that can shape airpower into the right tool for each security task it is assigned.

This study asserts that Gray is correct. America's warfighting fates depend upon finding a theory that can unite the promise of airpower with the contextual realities of COIN and help explain and anticipate how airpower can contribute in this unique environment.  But what airpower theories are available for this task?  Classical airpower theories such as those offered by Douhet, Mitchell, and the airmen of the Air Corps Tactical School (ACTS) view enemies as industrial states and seek victory through destructiveness.  These theories are generally inconsistent with the prospects of limited war.[11]  Colonel John Boyd's thinking on airpower accounts for modern technology and respects the variable character and

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[8] Colin S. Gray, *The Airpower Advantage in Future Warfare: The Need for Strategy* (Maxwell AFB, AL: Airpower Research Institute, 2007), viii.
[9] Ibid., vii.
[10] Ibid., viii.
[11] Dennis M. Drew, "Air Theory, Air Force, and Low-Intensity Conflict: A Short Journey to Confusion," in *The Paths of Heaven: The Evolution of Airpower Theory,* ed. Colonel Philip S. Meilinger (Maxwell AFB, AL: Air University Press, 1997), 321-347.  See also David J. Dean, *The Air Force Role in Low-Intensity Conflict* (Maxwell AFB, AL: Air University Press, 1986), 110.

context of war.  But ultimately, his ideas are too complex for many to grasp and are not sufficiently coherent to serve as a useful guide.[12] Robert Pape has developed a framework for analyzing the relationship between airpower strategies and political ends, but his approach is solely concerned with coercive airpower, thereby constraining its applicability and limiting the roles it can explain.[13]  Disqualifying each of these alternatives leaves only one credible theory of airpower to be considered: Colonel John Warden's *Enemy as a System* (EAS).

EAS is a complete and modern theory of airpower that bears strong consideration as a means of adapting airpower to the challenge of COIN. Developed by Warden during his career as an Air Force officer and recognized airpower intellectual,[14] EAS imagines enemies according to their organizational architectures and advocates the employment of modern airpower to paralyze enemies at the systemic level.[15]  The core notions of Warden's theory inspired the highly successful Desert Storm air campaign, and aspects of the theory found broad influence in airpower doctrine.  In contrast with Boyd's ideas, EAS is a coherent and relatively simple theory.  Dissimilar with Pape's analytical framework, EAS applies at the organizational and systemic levels and, while it favors paralysis of an enemy, is not limited to one strategic approach.   Unlike classical theories, EAS does not seek destruction of an opponent's society, but instead envisions discriminate warfare and precise attacks. Perhaps the most promising element of EAS with respect to the challenge of COIN is its focus on analysis and investigation of the enemy.  Such an

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[12] Lieutenant Colonel David S. Fadok, "John Boyd and John Warden: Air Power's Quest for Strategic Paralysis," in *The Paths of Heaven,* 368. See also Frans P.B. Osinga, *Science, Strategy, and War: The Strategic Theory of John Boyd* (London: Routledge, 2007), 5.

[13] Robert S. Pape, *Bombing to Win: Air Power and Coercion in War* (Ithaca, NY: Cornell University Press, 1996), 1-9.

[14] Colin Powell recalls Warden as a "brilliant, brash fighter pilot and leading Air Force intellectual on the use of airpower."  See Colin Powell with Joseph Persico, *My American Journey* (New York: Random House, 1995), 473.

[15] John A. Warden, "The Enemy as a System," in *Airpower Journal* 9, no. 1 (Spring 1995): 47-51.

approach is likely to produce a greater comprehension of the situational idiosyncrasies that lay at the heart of an effective, context-tailored airpower strategy.

This study evaluates the utility of John Warden's EAS theory in explaining and anticipating the role and relevance of airpower in COIN. Specifically, this thesis will argue that application of EAS (1) unlocks the conditional advantage of airpower in COIN by explaining and guiding airpower strategy; (2) demonstrates how COIN requires a fundamentally different airpower approach than Major Combat Operations; and (3) shows the grave risks of airpower application in COIN absent a deliberate strategy. As Warden himself has posited, the only route to sustained airpower success is an ever-improving approach to thinking, strategy, and planning.[16]  This thesis asserts he is correct, and shows how.

In demonstrating these assertions, this study is subdivided into six additional chapters representing two distinct methodological exercises. Chapters 2 and 3 are explorations of theory.  Chapter 2 exhaustively examines and evaluates Warden's EAS, finding that it demonstrates considerable promise as a way of thinking about airpower and COIN. Since Warden's theory focuses on organizations, Chapter 3 analyzes classical and contemporary insurgency theory, isolating a coherent notion of how insurgencies organize, behave, and satisfy requirements. Chapter 3 then compares and contrasts these two organizational visions, creating an analytical framework that adjusts EAS to account for key differences between organizational visions while preserving its core concepts.  Chapters 4-6 apply the resulting framework to historical evidence. Three case studies are probed using key questions regarding the relationship between airpower operations, enemy systemic functioning, and strategic outcomes.  Notably, each case deals with the inability of a nation possessing a material airpower advantage to

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[16] John A. Warden, *The Air Campaign: Planning For Combat* (San Jose, CA: toExcel, 2000), xi.

translate that advantage into a favorable outcome.  The conclusions drawn from these cases, presented in Chapter 7, have much to say about the importance of shaping airpower into right tool for each security task it is assigned.  Chapter 7 also includes a robust series of recommendations whose advisability became evident throughout the course of this study.  With the central themes and arguments of this work now evident, the stage is set for a thorough examination of the theory at the heart of this study: John Warden's airpower theory.

# Chapter 2

## The Theory of John Warden

*There was no line of cleavage between strategic and tactical air forces. It was an over-all effort, uniting all types of aircraft, coordinated for maximum impact.*

*--Tooey Spaatz*

*What gave American airpower such predominance in the Gulf, and what makes the United States incomparable as a military power, is its systematic quality.*

*--Eliot Cohen*

This chapter investigates and assesses John Warden's *Enemy as a System* (EAS) theory of airpower.  The investigation includes a review of the central propositions of and motivations and underpinnings behind EAS.  Included in the assessment is a look at the critiques of EAS and their validity, as well as a discussion of the relevance of EAS to counterinsurgency (COIN).  In order to understand Warden's ideas, it is useful to first contextualize the man himself.

### The Making of a Theorist

Colonel John Warden is one of, if not the most influential of modern airpower theorists.  His ideas formed the core of the successful US-led air campaign executed in the 1991 Gulf War.  Many of the concepts developed and argued by Warden have influenced the thinking of generations of airmen and remain key elements in Air Force doctrine.[1]

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[1]Air Force Doctrine Document 2-1.2, *Strategic Attack,* 12 June 2007, vii. "Strategic Attack seizes upon the unique capability of air, space, and cyberspace power to achieve objectives by striking at the heart of the enemy, disrupting critical leadership functions, infrastructure, and strategy, while at the same time avoiding a sequential fight through layers of forces."  Striking directly at leadership and avoiding a serial fight are tenets of Warden's theories of parallel attack and inside-out warfare.

As with most theorists, his life had a profound impact on the development of his ideas.

Warden's early experiences as an Air Force officer had perhaps the most significant influence on his subsequent theories. His service in Vietnam gave Warden an intimate insight into the hazards of military force disconnected from political aims. This ingrained in him a disdain for the type of feeble, graduated use of airpower that characterized the Rolling Thunder campaign. Warden saw this is an abrogation of the decisiveness possible through airpower, and an unnecessary expenditure of life and resources.[2] Staff work in various capacities later in Warden's career would expose him to deliberate plans and exercises he felt were detached from the realities of the battlefield and too focused on static warfighting notions. Together, Warden's experiences in Vietnam and in his early career as a fighter pilot and staff officer reinforced his belief that attrition was the wrong way to fight war. Overwhelming an enemy using the unique qualities of airpower, he believed, was preferable to protracted surface fighting.[3]

In the latter stages of his career, Warden's ideas on warfare and airpower began to coalesce into an airpower theory. While attending National War College, Warden researched and wrote a review of historical air operations called *The Air Campaign.* This work was unique and groundbreaking in its attempt to link together the strategic and tactical employment of airpower. The core tenets of strategic airpower argue that it can be an independent, war-winning instrument, whereas the application of tactical airpower is more concerned with support of ground forces through Close Air Support (CAS) and interdiction.[4] *The Air Campaign* was squarely focused on the conduct of air operations in a

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[2] John A. Warden, *The Air Campaign: Planning for Combat* (San Jose, CA: toExcel, 2000), 160.

[3] James D. Kiras, *Special Operations and Strategy: From World War II to the War on Terrorism* (London: Routledge, 2006), 24.

[4] Ibid., 24.

theater but also linked such operations to strategic outcomes. Warden recognized war as a competitive enterprise between two enemies seeking to impose their will on one another and he conceded that airpower was no solution to the unavoidable fog and friction of war.[5]

After additional staff and operational tours, Warden found himself in a crucial position on the Air Staff at a pivotal time. Saddam Hussein's invasion of Kuwait in August 1990 sent leaders at US Central Command (CENTCOM) scrambling for planning options. When General Norman H. Schwarzkopf called upon the Air Force to provide a campaign "air option," senior Air Force leaders gave Warden an opportunity to put his theories on airpower into practice in response to CENTCOM's time-sensitive request.[6] The air campaign plan devised by the Pentagon planning group under Warden's leadership, *Instant Thunder,* envisioned the use of airpower to paralyze the Hussein regime.[7] *Instant Thunder* modeled the Iraqi state along the lines of five concentric rings, each of which contained key regime subsystems. Warden felt targets within each ring could be systematically struck using stealth, precision, and simultaneity to disrupt regime functioning. While the Desert Storm air campaign was by no means a rote version of what Warden proposed, it showcased many of *Instant Thunder's* core concepts, making short work in 42 days of an Iraqi military which was then the fourth-largest military force in the world.[8] At the heart of *Instant Thunder* lay Warden's career-long drive for thoughtful warfighting mindful of both political aims and the promise of airpower. This drive would eventually produce the most complete theory of airpower in the modern era, a theory called *Enemy as a System.*

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[5] Warden, *The Air Campaign,* 123.
[6] John Andreas Olsen, *John Warden and the Renaissance of American Airpower* (Washington, DC: Potomac Books, 2007)*,* 144-151.
[7] Ibid., 144-151. Warden chose the name *Instant Thunder* as a contrast to the gradual escalation of the *Rolling Thunder* campaign.
[8] Ibid., 144-159.

9

**What Is *Enemy As a System?***

In simplest terms, EAS is a theory that presents and advocates a way of thinking about airpower and its relationship to the larger phenomenon of war.[9]  The central proposition of this theory is that all enemies are organizations and therefore are subject to analysis and systemic exploitation.  The most effective means of contending with an organization is the creation of system paralysis using parallel air attack to isolate subsystems from one another and prevent their meaningful orchestration.[10]  This proposition rests on Warden's belief that in war "command is the *sine qua non* of military operations.  Without command, a military organization is nothing but a rabble."[11]  The path to victory travels first and foremost through the mind of the enemy commander.[12]  Thus, Warden believes all war actions should be aimed at impacting enemy decisions.[13]  In visualizing the enemy not as a fielded force but as a system that behaves according to the harmonization of its subcomponents, Warden arrives at the conclusion that victory is achieved not by destroying fielded forces, but by targeting key vulnerabilities within subsystems in order to alter enemy behavior.[14]

Warden's theory links enemy structural weaknesses with the promise and effects of airpower.  He identifies airpower's key strength as the ability to directly threaten enemy core vulnerabilities without needing to lock horns with its protective forces. With the maturation of stealth and precision technologies making airpower continually more discriminate and less vulnerable to air defenses, Warden envisions EAS

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[9] Ibid.*,* 106.
[10] John A. Warden, "Air Theory for the Twenty-first Century" in *Challenge and Response: Anticipating US Military Security Concerns,* ed. Karl P. Magyar (Maxwell AFB, AL: Air University Press, 1994), 325.
[11] Warden, *The Air Campaign*, 44.
[12] David R. Mets, *The Air Campaign: John Warden and the Classical Airpower Theorists* (Maxwell AFB, AL: Air University Press, 1999), 58.
[13] John A. Warden, "The Enemy As a System," *Airpower Journal* 9, no. 1 (Spring 1995), 49.
[14] Ibid., 49-54.

as a marriage between the technology of modern warfare and the inherent vulnerability of organizations. In his view, airpower's mobility and power projection provide the maneuver advantage necessary to directly attack an enemy's strategy by disrupting the basic functioning of its warfighting organization.[15] With an enemy unable to operate meaningfully, the imposition of friendly will is only a matter of time. Warden saw modern precision and stealth as the keys to making warfare strategic again, as it had been in ancient times before social constructs such as armies, navies, states, and economies had rendered it a painstakingly tactical and bloody enterprise.[16]

Warden's development of EAS answers a number of intellectual impulses that are germane to comprehending his theory. His experience in Vietnam ingrained within Warden a deep disdain for military activities lacking clear links to policy.[17] This made Warden, like other US officers of his generation, an adherent to the necessity of alignment between political purpose and military force.[18] His study of Alexander the Great gave Warden a special appreciation for the timeless premium on swift and low-cost victory through superior strategy.[19] This helps explain Warden's attraction to the classical airpower belief that technology could decide war rapidly, abbreviating its suffering, cost, and inhumanity. The dovetailing of enemy focus and the "airman's perspective" fueled Warden's thoughts as he first constructed and then advocated an air campaign for Operation Desert Storm.[20] While Warden's *Instant Thunder* campaign plan was not fully adopted, its strategic concepts, heavy

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[15] Scott West, "Warden and the Air Corps Tactical School: Déjà vu?" (Unpublished Master of Arts thesis, School of Advanced Air and Space Studies, 1995), 14.
[16] Warden, "The Enemy as a System," 52.
[17] Olsen, *Warden and the Renaissance of American Airpower,* 19-22.
[18] Kiras, *Special Operations and Strategy,* 24.
[19] John A. Warden, interview by Lt Col Suzanne B. Gehri, 12 October 1991, transcript no. 114, Desert Story Collection, USAF Historical Research Agency, Maxwell AFB, AL.
[20] Olsen, *Warden and the Renaissance of American Airpower,* 112-113. See also Stephen D. Chiabotti, "Letter to the Editor," *Joint Force Quarterly* 52 (Winter 2009):11-12.

reliance on airpower, and systems analysis of the Hussein regime were central to the war's conduct.

The success of the air campaign in Desert Storm led to broader recognition and debate of EAS as well as Warden's further development of the theory in the years following the Gulf War. He attempted to stitch together more tightly the various strands of his thinking on warfare and airpower, which led him to develop a five-step process.[21] In essence, Warden's process demanded that airpower strategists:

1) Understand the political and technological environment;
2) Identify political objectives;
3) Determine how to induce the enemy to do your will;
4) Use systems analysis to identify key targets within enemy subsystems; and
5) Attack the right targets, in parallel, to produce the desired changes in enemy behavior.

To aid strategists in these considerations, and to provide a way of simplifying the complex structure of the enemy, Warden placed a descriptive model of enemy organization at the heart of his theory.

**Imagining the Adversary: The Five-Ring Model**

John Warden's twin beliefs in the ubiquity of organizations and their systemic vulnerability catalyzed his thoughts into the development of the Five-Ring Model (FRM), best described as a descriptive model of modern combatants.[22] FRM systematically depicts enemy organizations according to five discrete categories (Figure 1, below):

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[21] Warden, "Air Theory for the Twenty-first Century" in *Challenge and Response,* 325-326.
[22] Warden, *The Air Campaign,* 145; See also Olsen, *John Warden and the Renaissance of American Airpower,* 112.
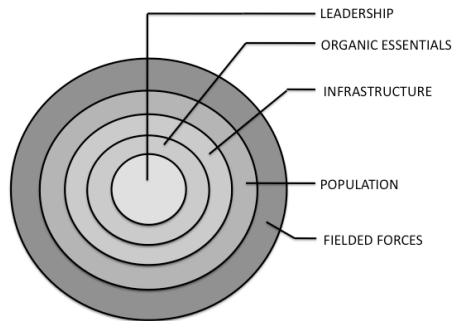
**Figure 1. Warden's Five-Ring Model (FRM)**
*Source: Warden, "The Enemy as a System."*

What Warden proposes in this model is not a mirror of reality but rather a heuristic device that captures in "big picture" terms how an enemy is organized.  Warden claims FRM is scalable to any organization and a useful starting point for analysis of any organized opponent.  The validity of this claim rests on the requirement for any organization, from a drug cartel to a modern state, to function systematically.  Given that all organizations have a discernible purpose, regardless of size or structure, they are therefore "strategic entities."[23]

Warden believes that contending effectively with strategic entities demands recognition of the innermost ring, the *Command* ring, as the most critical.  In his estimation, this ring provides direction for the remaining subsystem rings, as it animates the entire organization toward a common purpose.  Attacking leadership's existence or its ability to function, sometimes called "inside-out" warfare,[24] is the key to avoiding protracted entanglement with the fielded forces in the outer ring. Warden believes that a decisive stroke against the leadership ring, such as that visited upon Darius by Alexander at Gaugamela, can paralyze the entire system and obviate the need to destroy significant elements of a society in order to fulfill war aims.[25]  He leaves room for the notion that

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[23] Warden, "The Enemy as a System," 47.
[24] Dennis M. Drew, "After Desert Storm: Warfare from the Inside-out," in *Air Force Times,* 2 March 1992, 29.
[25] Warden, interview with Lt Col Suzanne B. Gehri, 12 October 1991.

such a decisive stroke might not be feasible, yet acknowledges that not all enemies will submit to desired behaviors without violent competition. Thus, Warden advocates warfighting that seeks swift decision while limiting destruction, thereby enhancing the potential for a better state of the peace. Warden labels this middle way of war "strategic paralysis," and believes it is best done via simultaneous attack of key targets in all rings with a special emphasis on core command functions.

Beyond the leadership epicenter, the FRM provides additional categories that describe, in Warden's estimation, the key subsystems in any organization. *Organic Essentials* are those facilities or processes without which the organization or state cannot function coherently. In a state, these essentials would be strategic materials and facilities such as electrical generation and petroleum. This ring is adjacent to the leadership ring because of the critical importance of strategic materials to the ability of an enemy to resist. The next ring, *Infrastructure*, represents the ability of an organization to transform its organic essentials into essential functions. This ring is generally composed of transportation capabilities such as road, rail, sea, and air transport. Reducing this ring reduces the energy level of the organization, impeding its ability to resist. *Population* comprises the fourth ring. While Warden considers targeting this ring to be risky and morally troublesome, he recognizes that a state cannot resist the imposition of hostile will without a population to maintain its industrial and political functioning.[26] Moreover, Warden leaves room for the classical notion that civil unrest can be instrumental in a war decision, as evidenced by his advocacy of psychological operations in Desert Storm war plans.[27] In the outermost ring, *Fielded Forces* represent the enemy system's protective mechanism. Warden asserts that contending with fielded forces is the least fruitful

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[26] Discussion of the Five Rings and related concepts is taken from Warden, "The Enemy as a System" and from the author's interview with Warden, 13 February 2009.
[27] Warden, interview with Lt Col Suzanne B. Gehri, 12 October 1991.

means of conducting war, given airpower's ability to directly threaten inner rings without the need for a bloody exchange between surface forces. While critiques of Warden's FRM have been plentiful, the theory nevertheless rests on a logical, if perhaps simplistic, articulation of organization theory.[28]  Warden felt EAS and FRM could serve both theoretical and practical roles, a view shared by others.[29]  In order to more fully appreciate the motivations and underpinnings of EAS and FRM, it is helpful to revisit Warden as an individual, and specifically his relationship with the Air Force.

**Motivations: An Alexandrian Solution**

Warden's belief that airpower would be the dominant form of combat power well into the twenty-first century inspired him to seek changes within the Air Force.  EAS was a manifestation of this drive for change.  It is evident in looking at his ideas and pronouncements that Warden hoped EAS would gain some level of sponsorship and use within the USAF as a planning template.  Warden believed that thinking about potential adversaries *before* circumstances became exigent was the key to systematic rather expedient warfighting.[30]  In Warden's mind, the systematic dismantling of enemy system would respect political imperatives more effectively than the large-scale destruction reflected in other approaches.  By generating surgical yet disabling effects in the manner of "an executioner's sword rather than a bludgeoning cudgel," the FRM would avert unnecessary destruction.[31]  Warden believed stability operations and limited wars would become continually more prevalent in the post-Cold War period, and these conflicts would place a

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[28] Stephen P. Robbins, *Essentials of Organizational Behavior,* 7th edition (Upper Saddle River, NJ: Prentice Hall, 2003), 178-195.
[29] Richard G. Davis, *On Target: Organizing and Executing the Strategic Air Campaign Against Iraq* (Washington, DC: Air Force History and Museums Program, 2002), 62.
[30] Olsen, *John Warden and the Renaissance of American Airpower,* 112; Warden, interview with the author, 13 February 2009.
[31] The "sword and cudgel" metaphor belongs to Kiras, *Special Operations and Strategy,* 26.

premium on discriminate warfighting.[32]  He had little confidence that existing USAF planning processes could foster such nuance, and felt his model could foster the kind of clear, organized approach to thinking he saw necessary.[33]  Thinking about war and airpower had not been the service's forté in the years before the 1991 Gulf War.  Many of the ideas that did exist were outmoded in Warden's estimation.[34]  He saw a pervasive lack of focus on meaningful planning together with an inordinate tactical fixation that cherished the tools of war without a sober consideration of war aims.[35]  Warden developed his theory to get airmen thinking with greater complexity and lucidity about war and airpower in the modern era.  Still, while Warden was motivated by the prospect of using technology to improve the planning and conduct of war, he was noticeably influenced by and his theory is consistent with ideas that pre-dated the maturation of airpower.

**Foundations: Evidence of Classical Influences on Warden's Thinking**

Key elements of Warden's theory are consistent with timeless notions of war, and demonstrate that EAS rests on firm theoretical footing.  Warden's theory, reinforced by his own experiences in Vietnam, is concerned with a close union between the conduct of war and the political objectives it seeks to fulfill.  Wars are fought for political purposes, and these must be clearly communicated, understood, and carefully considered as violence is carried out.  His declaration that military and political strategies cannot be disunited is consistent with the theory of Carl von Clausewitz, who declared war "should never be thought of as something autonomous but always as an instrument of

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[32] Warden, interview with the author, 13 February 2009.
[33] Edward C. Mann, *Thunder and Lightning: Desert Storm and the Airpower Debates* (Maxwell AFB, AL: Air University Press, 1995), 87, 94, 137.
[34] John A. Warden, "Success in Modern War: A Response to Robert Pape's Bombing to Win," in *Security Studies* 7 (Winter 1997-98), 172-190.
[35] Warden, interview with Lt Col Suzanne B. Gehri, 12 October 1991.

policy."[36]  Warden's preference for regime paralysis demonstrates an awareness that subduing an enemy while limiting the destruction inflicted on his forces and society may well be a requirement imposed by political masters seeking limited aims.[37]  He declares that non-lethal weapons and technologies carry enormous potential "if we accept that war is fought to make the enemy do your will."[38]  He embraces the premise that concessions short of utter destruction are typical in war.[39] These elements in Warden's theory clearly echo Clausewitz, who declared that "[t]he political object is the goal, war is the means of reaching it, and means can never be considered in isolation from their purpose."[40]  In other words, the use of force and level of violence in war are not tied to punishing or annihilating the enemy, but to achieving specific political objectives.  On this, Warden and Clausewitz agree, but Warden's theory is not merely a recapitulation of Clausewitzian concepts updated for the airpower age.  Warden and Clausewitz differ in a number of principal ways, most significantly on the level of attention that should be paid to contending with the enemy's fielded forces.  While acknowledging political limits, Clausewitz decreed that "[t]he (enemy's) fighting forces must be *destroyed*" (emphasis in original).[41]  Warden argues that concentrating on fielded forces is not only unnecessary but counterproductive.[42]  The two also disagree on the role of violence in war. Warden does not believe violence to be an essential element in war, which he prefers to think of as a form of political competition that can

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[36] John A. Warden, interview by Lt Col Suzanne B. Gehri, 10 December 1991, transcript no. 109, Desert Story Collection, USAF Historical Research Agency, Maxwell AFB, AL. Carl von Clausewitz, *On War,* trans. Michael Howard and Peter Paret (Princeton, N.J.: Princeton University Press, 1976), 88.
[37] Olsen, *John Warden and the Renaissance of American Airpower,* 151.
[38] Warden, "Air Theory for the Twenty-first Century" in *Challenge and Response,* 312.
[39] John A Warden, "Employing Air Power in the Twenty-first Century," in *The Future of Airpower in the Aftermath of the Gulf War,* eds. Richard H. Shultz, Jr. and Robert L. Pfaltzgraff, Jr. (Maxwell AFB, AL: Air University Press, 1992), 63.
[40] Ibid., 88.
[41] Clausewitz, *On War,* 90.
[42] Warden, "The Enemy as a System," 51.

often be decided with merely the threat of violence accompanied by a superior strategy.[43]  Clausewitz argues, conversely, that violence is an essential element of war and fundamental to its very nature.[44]  Warden's notion that an enemy can be defeated with minimum rather than maximum violence identifies him with a different theorist of war.

Two themes evident in EAS, sensitivity to non-physical factors in war and an attraction to superior maneuver rather than superior firepower, resonate in the thinking of Sun Tzu.[45]  Warden declares that "the tools of war have nothing to with its essence," and that "fighting is not...even desirable."[46]  Declaring enemy fielded forces largely irrelevant by virtue of airpower's three-dimensional reach, Warden concentrates on subduing the leadership ring of the enemy system without the need for heavy fighting.  Going a step further, Warden declares "war is not quintessentially about fighting and killing; rather it is about getting something the opponent is not inclined to hand over."[47]  This is at once an embrace of the notion of defeating enemy will and an assertion that violence is not always the best means of doing so.  Clearly Warden is moved by the potential of a victory earned through superior planning, psychological advantage, and avoidance of force-on-force destructiveness.  These are themes prevalent in the work of Sun Tzu, who stated that "to subdue the enemy without fighting is the acme of skill."[48]  Sun Tzu presented armed conflict as a recourse to be undertaken only when an enemy could not be defeated through isolation

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[43] Ibid., 43-51. Sun Tzu, *The Illustrated Art of War:  The Definitive English Translation by Samuel B. Griffith* (New York:  Oxford University Press, 2005), 125.

[44] Clausewitz, *On War*, 89.  Clausewitz wrote that the total phenomenon of war consists of reason, chance, and violence, and that these forces are fundamental and essential to war (paraphrased).

[45] In early writings that pre-date EAS, Warden admonishes his reader to consider objectives "*as seen through the enemy's eyes, not one's own*" (emphasis in original). See Warden, *The Air Campaign,* 112.  Sun Tzu: "[k]now the enemy and know yourself; in a hundred battles, you will never be in peril."

[46] Warden, "The Enemy as a System." Sun Tzu, *The Illustrated Art of War*, 125.

[47] Warden, "Air Theory for the Twenty-first Century" in *Challenge and Response*, 312.

[48] Sun Tzu, *The Illustrated Art of War,* 115.

and demoralization, and argued that victory should be sought in the shortest possible time, at the least possible human cost, and with infliction of the fewest possible enemy casualties.[49]  Warden's theory resonates with the notion that technology, specifically airpower, has made operations modeled on Sun Tzu's principles more feasible than ever.  This is a central theme in EAS.

Warden's idea that the most profitable application of airpower lies in the systematic targeting of enemy subsystems connects him with Air Corps Tactical School (ACTS), whose key theorists championed similar notions.[50]  Like the ACTS authors of industrial web theory, who believed that tailored aerial attack of an enemy's industrial mobilization capacity would bring swift victory, Warden envisions a central role for airpower in the creation of systemic enemy collapse.[51]  He exhibits a belief in the inherency of offense in airpower by virtue of its mobility and power projection, along with the difficulty in defending aerial attack as compared to land or sea attack.[52]  In his formulation, airpower's ability to hold enemy subsystems at risk to a greater degree than other forms of military power provides an alternative to the prospect of tactical attrition.[53]  Like his ACTS predecessors, Warden sought a fusion between planners and intelligence analysts that could yield an airpower blueprint for enemy collapse.[54]  Both sought to use airpower to achieve economy of force.  ACTS pioneers sought a "bottom-up" disruption of enemy order, and hoped for surrender as a function of economic and social disruption.  Warden's approach, however, seeks a "top-down" capitulation of the enemy elite while leaving as much of enemy society intact as possible.[55]

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[49] Ibid., 62.
[50] West, "Warden and the Air Corps Tactical School: Déjà vu?," 26.
[51] Mann, *Thunder and Lightning,* 45.
[52] Warden, "Success in Modern War," 172-190.
[53] David Fadok, "John Boyd and John Warden: Air Power's Quest for Strategic Paralysis," (masters thesis, School of Advanced Air and Space Studies, 1995); see also Kiras, *Special Operations and Strategy,* 17.
[54] Warden, interview with Lt Col Suzanne B. Gehri, 12 October 1991.
[55] Mets, *The Air Campaign: John Warden and the Classical Airpower Theorists,* 58-75.

Both EAS and industrial web theory depend upon a combination of airpower and system warfare to achieve decision.[56]

The preceding discussion suggests that Warden's EAS is consistent with the key tenets of a number of respected theories of war, lending it some credibility and foundational strength. At the strategic level, EAS is coherent with Clausewitz' logic, which holds that military force must not be considered in isolation from its purpose and that war and politics are tightly interwoven. At the operational level, EAS is concerned with indirectness, minimal destruction, and intellectual supremacy, all notions canonized by Sun Tzu. Warden's ideas about planning, targeting, systems analysis, and aerial decisiveness correlate conceptually with the central propositions of the industrial web theory developed at ACTS. Thus, by weaving together classical ideas and technological promise, Warden provides airmen with a modern theory of airpower that attempts to capture timeless aspects of war while optimizing the benefits of modern technology. This does not imply that EAS is without fault, and a number of critiques deserve exploration.

**Critiques and Their Validity**

Is Warden's theory a valid and coherent body of ideas? Does it present a thoughtful means of achieving decisiveness in modern war, or does it seek unrealistic shortcuts to war's inescapable chaos and destruction? Criticisms of Warden's theory follow three principal themes: balance between simplicity and fidelity, dependence on intelligence, and

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[56] It should be noted here that while proponents of industrial web theory believed it would be a decisive and economical manner of attaining a rapid victory in WWII, this belief was not borne out by operations. While the bombing of oil production was an important element in the exhaustion of the German war machine, airpower remained secondary to ground forces in Allied strategy, and Germany's population and administrative capacity proved resistant to an airpower-induced collapse. See Richard G. Davis, *Bombing the European Axis Powers: A Historical Digest of the Combined Bomber Offensive 1939-1945* (Maxwell AFB, AL: Air University Press, 2006), 594-595. See also Robert A. Pape, *Bombing to Win: Air Power and Coercion in War* (Ithaca, NY: Cornell University Press, 1996), 312-313.

context-sensitivity.  In order to fairly evaluate the utility of EAS, each of these critiques must be examined for validity.

Some have said that Warden's theory, designed to simplify the complex reality of enemy organization, leaves out too much.  As illustrated by David Mets, Warden's FRM assumes a great deal about human behavior in its drive for utility.[57]  Warden takes for granted the existence of universal structures and traditional command-and-control, when he asserts that all organizations are put together about the same way.[58]  Lewis Ware asserts the FRM to be an insufficient representation of the social contours constituting the human activity of war. Ware's analysis concedes the tremendous value of a model such as EAS in developing a plan for air action, but does not consider it sufficient for a clear and coherent understanding of the enemy's social and political identity, something he considers necessary if meaningful political interaction between belligerents is to be achieved.[59]  In other words, the conduct of war requires political and social knowledge orphaned by the FRM in its simple design.  But Ware goes further, charging that the FRM does not accurately depict a system, but merely a static collection of enemy components.  What the model lacks, Ware theorizes, is a clear reflection of the organic links between each ring, and how those links operate to produce enemy behavior.[60]  Without a clearer representation of how enemy components work together to form a system and how that system operates on a social level, Ware worries that strategists and planners may be seduced by the tendency to see the enemy as merely a collection of targets.[61]  Without knowing how the rings work together, planners could actually produce unpredictable effects by striking certain

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[57] Mets, *The Air Campaign: John Warden and the Classical Airpower Theorists*, 58.
[58] Warden, "The Enemy as a System," 51.
[59] Lewis Ware, "Some Observations of The Enemy As a System," in *Airpower Journal* 9, no. 4 (Winter 1995),
http://www.au.af.mil/au/cadre/aspj/airchronicles/apj/apj95/win95_files/ware.htm.
[60] Ibid.
[61] Ibid.

targets without thinking through how might influence other rings or the overall system.  This collection of criticisms raises valid questions concerning EAS.  Still, some level of simplification is necessary to create unified action, because, as Warden argues, "offense or defense at an operational level requires enormous coordination."[62]  EAS thus suffers from the same tension that bedevils any model in its struggle to make sense of a more complex reality without critical omission.

A second critique of EAS concerns its dependence on intelligence information, and its appetite for technical rather than strategic analysis. Warden writes that enemy responses are unpredictable in *The Air Campaign,* which pre-dated his development of EAS concepts.[63]  This makes clear his subscription to the enduring presence of chance in war, and with it a need for continuing pursuit of information concerning the enemy.  Thus, Warden has developed a model that cannot function as an effective guide for strategy without being fed a considerable amount of information concerning key enemy vulnerabilities. Warden argues this is a helpful approach, telling us *what we do not know* about an enemy, thereby guiding an intelligence-gathering agenda.[64]  Yet pursuit of intelligence according to the fixed architecture represented by the FRM would likely lead to a wealth of technical data concerning key targets but provide little insight or intelligence concerning enemy motives, strategy, and intent. As previously discussed in Ware's critique, Warden's goal of organizational paralysis depends not only on striking targets but also on a rich knowledge of how a society operates and how to stay apace with the changing behavior of an enemy who will inevitably react.[65]  In other words, it is not enough to collect and categorize technical data on enemy subsystems; what is truly needed is an understanding of how the subsystems interact to generate behavior.  Sun Tzu's admonition to

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[62] Warden, *The Air Campaign,* 153.
[63] Ibid., 128.
[64] Warden, "Air Theory for the Twenty-first Century" in *Challenge and Response,* 318.
[65] Lewis Ware, "Some Observations of The Enemy As a System."

"know the enemy"[66] implies a need for *analysis*; in this case, analysis concerning the *links between rings* in addition to the rings themselves. Manipulating enemy behavior to achieve war aims, after all, is the entire point of EAS. Models that attempt to simplify matters of war by developing knowledge of discrete targets can seduce planners and practitioners into believing that victory is a simple matter of targeting. But as Clausewitz warned, "it is easier to use theory to organize, plan, and conduct an engagement than it is to use it in determining the engagement's purpose."[67] Perhaps, as Warden argues, the strengths of EAS are powerful enough to overcome these intelligence and analysis issues. Whether it can overcome contextual sensitivity is another matter.

Warden's theory was developed within a specific context, and whether it can prove useful beyond that context is an open question. The development of EAS was closely tied to the 1991 Gulf War, and Warden's subsequent elaboration of the theory is laced with assumptions concerning clearly defined antagonists, lucid objectives, and other fixtures of interstate warfare. EAS proved highly successful in this context. During the war's planning phase, EAS was precious in its ability to communicate a nuanced airpower concept to Gen. Schwarzkopf in clear terms.[68] In execution, while Operation Desert Storm was not a verbatim exercise of EAS, the theory provided the conceptual underpinning for a dominant air campaign that left little to be desired.[69] Admittedly, it would be dangerous to bestow undue credit to EAS for what should have been an orderly victory by objective standards; Iraq fielded an overmatched military highly dependent on centralized control by a rational leader, the terrain was forgiving, and US forces had strategic warning. While Iraq's air defenses were stout, US forces had a

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[66] Sun Tzu, *The Illustrated Art of War,* 125.
[67] Clausewitz, *On War,* 140.
[68] Richard T. Reynolds, *Heart of the Storm: The Genesis of the Air Campaign Against Iraq* (Maxwell AFB, AL: Air University Press, 1995), 57.
[69] Mann, *Thunder and Lightning,* 22-23.

tyranny of aerial numbers and technology.  Still, many analysts at the time predicted a bloody and costly struggle in Iraq because of the size of Hussein's army, his disregard for human costs, and the advantages of a defensive posture requiring coalition forces to build and sustain a massive logistical network.[70]  EAS inspired a plan that proved such concerns baseless, and Warden's insights were borne out quite well by the operational paralysis of Saddam Hussein's sizable and modern military forces.  These feats were made possible through airpower employed in much the way Warden suggested, but it is unclear whether such success would be duplicated in a more evenly-matched state-on-state war, and even less clear whether such an approach could work against a non-state actor in an irregular warfare (IW) campaign.

Critiques of EAS carry some validity but they do not invalidate the theory.  EAS does simplify, specifically with respect to enemy behavior and systemic functioning.  Whether or not it *oversimplifies* is a matter of subjective interpretation, but with modest elaboration of the FRM to include key links between enemy subsystems, such criticism would be moot.  EAS does depend on intelligence and could foster a tendency for targeteering in lieu of strategic analysis, but these are cautions rather than fundamental invalidations of the theory.  Warden assumes EAS will provide a launch point for planners and strategists who, led by competent commanders, will apply their own thinking to the problem at hand.[71]  Finally, while EAS was developed and tested within a state warfare context, it would be premature to declare it invalid for alternative application without first testing such a proposition.  Given the basis of

[70] For example, Eugene LaRocque (retired US Admiral and Director of the Center for Defense Information) remarked "[w]e couldn't drive Iraq out of [Kuwait] with airpower. And using ground forces would be Vietnam all over again—only worse."  See Micah L. Sifry and Christopher Cerf, eds., *The Iraq War Reader: History, Documents, and Opinions* (New York: Simon and Schuster, 2007), 73-75.  See *USA Today,* 6 August 1990 for several other examples.
[71] Warden, interview with the author, 13 February 2009.

the theory in a number of timeless principles and ideas, it holds clear potential for utility beyond state conflict.

Pulling apart Warden's theory for analysis is a valuable first step, but the findings of the preceding analysis must be subjected to what Colin Gray calls the "strategist's best friend": the question "so what?"[72] What is the value of EAS with respect to the central subject of this study—the conduct of airpower in COIN?  Can it explain and better guide the performance of airpower in COIN?  The first step in grappling with these questions is to better define the problem they seek to solve.

**COIN and the Crisis of Relevance in Today's Air Force**

Today's Air Force continues to struggle to meet the challenge of COIN, and in particular, finds difficulty adapting itself against irregular opponents where doing so challenges long-held airpower beliefs and ideas.  While change is difficult for any large organization, it is particularly difficult for military organizations wrestling with constant uncertainty, potent political forces, and hidebound institutional values.[73] The latter challenge is perhaps the most significant barrier to Air Force COIN competency.  Most airmen subscribe to the notion that superior technology can produce economy of force in any context, echoing early airpower theorists who believed mastery of airpower technology was the key to avoiding massive, force-on-force struggles.[74]  These ideas have been central to the Air Force since its birth as a service, and are deeply ingrained. WWII was a proving ground for key airpower tenets while also providing the vehicle by which the USAF traveled to institutional

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[72] Colin S. Gray, *Fighting Talk: Forty Maxims on War, Peace, and Strategy* (Westport, CT: Praeger, 2007), 106.

[73] Harold R. Winton, "On Military Change" in *The Challenge of Change: Military Institutions and New Realities: 1918-1941,* eds. Harold R. Winton and David R. Mets (Lincoln, NE: University of Nebraska Press, 2000), iii.

[74] David R. Mets, *The Air Campaign: John Warden and the Classical Airpower Theorists,* 74.

independence.[75]   Having earned its stripes, the young Air Force found itself constantly fighting for relevance, and this constant fight transformed core airpower ideas into indivisible beliefs.  The net result over time has been an Air Force perspective zealously wedded to technology, offensive operations against vital centers, and a drive for decisiveness.[76]  The requirements of COIN, explored in greater detail from the enemy's perspective in the next chapter, directly challenge this perspective; technology may not yield economy of force, vital centers may not be reachable by airpower alone, and patience may be more important than swiftness.

While recent USAF doctrinal updates embrace "COIN truths," by itself this does little to align airpower with the practical demands of COIN.  Air Force Doctrine Document (AFDD) 2-3, *Irregular Warfare*, is plagued by two principal flaws that work against its goal of providing a guide for airpower in COIN.  First, in taking a forward-looking approach, it largely neglects the lessons of past COIN endeavors; Vietnam, the longest war in US history and America's most vivid experience with insurgency in the modern era, is discussed on a mere three of its 103 pages.  Second, the document fails to present a coherent theory to help explain, predict, and shape the application of airpower in COIN.[77]  In neglecting aspects of both history and theory, AFDD 2-3 fails to create a unifying vision of the potential of airpower in such wars.  While offering a useful collection of principles and practices, it fails to bind them together with a central body of propositions or common framework.  In particular AFDD 2-3 does not address the potentially debilitating gap between how

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[75] Richard J. Overy, *The Air War: 1939-1945* (Washington, DC: Potomac Books, 2005), xi, 10.  Carl H. Builder, *The Icarus Syndrome: The Role of Air Power Theory in the Evolution and Fate of the US Air Force* (New Brunswick, CT: Transaction Publishers, 2003), 133-136.
[76] Jeffrey G. Barlow, *Revolt of the Admirals: The Fight for Naval Aviation 1945-1950* (Washington, DC: Government Reprints Press, 2001), 99-103.
[77] Air Force Doctrine Document (AFDD) 2-3, *Irregular Warfare,* 1 August 2007, 23, 71, 87.

airmen think about airpower and what will be demanded of them in COIN. Can EAS close this gap between the promise and reality of airpower in COIN? Assuming airpower provides an asymmetric advantage for the US in COIN, can EAS help unlock that advantage?

**EAS as a Guide for Airpower in COIN**

The Desert Storm air campaign provides clues as to the relevance of EAS in other contexts, to include COIN. Warden believed that methodically applied airpower could systemically paralyze the Iraqi state, obviating the need for a protracted, force-on-force clash. He was largely proven correct. He also held in prime regard the importance of careful thinking and planning according to political objectives, discriminate effects, and an appreciation for enemy strategy and organization.[78] These concepts, which were key to the lopsided victory achieved by the US-led coalition in 1991, appear valuable in any type of war. Does this union between classical airpower theory and respect for discriminate and politically aligned effects lend EAS relevance to COIN? Warden believes the answer to this is an unequivocal "yes."

According to Warden, EAS can be used to explain and predict the performance of airpower in a variety of contexts, to include those in the family of phenomenon popularly known as IW, which includes COIN.[79] He has asserted that Al Qaeda and Taliban forces can be modeled according to the FRM.[80] An indication of the attractiveness of EAS as a powerful and versatile explanatory device is that at least three other authors have attempted various forms of exportation of the EAS theory to IW.[81] Warden himself clearly foresaw IW applications for EAS, declaring

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[78] Warden, interview by Lt Col Suzanne B. Gehri, 10 December 1991.

[79] Warden, interview with the author, 13 February 2009.

[80] Warden, "Terrorists Are More Vulnerable Than Many Believe," in *USA Today,* 9 October 2001, 9A. It should be noted here that Warden firmly believes *all* organizations have five rings and are constructed similarly

[81] George Chappel, "A Terrorist Organization As a System: Unleashing Warden's Five-Ring Model," (student research paper, Newport, RI: US Naval War College, 2002);

"guerrilla warfare is well described by the five rings."[82]  His logic holds that EAS is a valid theory of airpower and that airpower obeys no peculiar limit in IW.[83]  Here, Warden is on point.

Based on the preceding analysis, this study will proceed on the premise that EAS, though flawed, is nevertheless a useful tool for exploring the role and relevance of airpower in COIN.  In seeking to advance an enhanced understanding of airpower in COIN, this study challenges the idea that IW and traditional warfare are essentially different.[84]  While requiring different approaches, they are each subsets of same phenomenon known as *war*; the character of war is demonstrably polymorphous, but its essential nature is elemental and fixed.[85]  Thus, dichotomizing these forms can create conceptual and organizational impediments to proficient conduct of each.  Unless they are recognized as varying forms of a single responsibility to the nation, the problem of effectiveness in both forms will remain beyond the grasp of its military forces.  Just as believing airpower is an automatic advantage is fallacious, to simply fall into the thought trap that airpower is somehow less relevant in COIN because "COIN is ground-centric" sidesteps the more difficult and critical business of finding ways to put airpower to work in all forms of war.

EAS is a standing challenge to the assertion that COIN enemies are too complex for systemic analysis.[86]  Regardless of form, war requires unified action.  Unified action requires organization.  Organization, according to Warden, makes any enemy subject to systemic analysis and

Richard Hazdra, "Al Qaeda As a System," (strategy research project, Carlisle Barracks, PA: US Army War College, 2006); Michael Katka, "Global Insurgency: A Prescription for Imposing Strategic Paralysis," (research report, Carlisle Barracks, PA: US Army War College, 2008).

[82] Warden, "Enemy as a System," 53.
[83] Warden, interview with the author, 13 February 2009.
[84] DODD 3000.07, *Irregular Warfare,* 1 December 2008.
[85] David J. Lonsdale, *The Nature of War in the Information Age: Clausewitzian Future* (London: Frank Cass, 2004), 222-223.
[86] AFDD 2-3, *Irregular Warfare*, 8.

aerial targeting.  As Napoleon declared: "the battlefield is a scene of constant chaos. The winner will be the one who controls that chaos, both his own and the enemy's."  Insurgencies must live by this rule just the same as any other entity seeking objectives through organized violence. Insurgencies, while challenging in unique ways, are subject to deliberate analysis and whatever strategic profits it may yield.

## Conclusion

EAS demonstrates significant potential as a theoretical and practical device.  With its basis in the ideas of Clausewitz, Sun Tzu, ACTS theorists, and Warden himself, EAS provides a framework that respects both the enduring realities of war and promise of airpower.  The remainder of this study will concentrate on subjecting Warden's theory to the two tests described in the introduction: a test of consistency with insurgency theory, and an evidentiary test using historical case analysis.

# Chapter 3

## Theories and Concepts of Insurgent Organization

*Insurgents start with nothing but a cause and grow to strength,
while counterinsurgents start with everything but a cause and
gradually decline...to weakness.*

*--Frank Kitson*

The preceding chapter explored John Warden's *Enemy as a System* (EAS) theory of airpower, which envisions the enemy as a system of five concentric rings, with the most critical system to organization closest to the center. He advocates the systemic analysis of enemies using this Five-Ring Model (FRM), and believes that strategic paralysis of the enemy organization, through systematic targeting of subsystem vulnerabilities, is the best way of war.[1] Warden proposes that this approach to warfare is applicable to *all* enemies, to include insurgent organizations, declaring "all strategic entities are put together in about the same way."[2]

This purpose of this chapter is to test this claim by comparing his vision of how enemies are "put together" with one of insurgent organizations informed by the most prevailing writings on insurgency and counterinsurgency. In other words, reconciling EAS with insurgency requires deconstruction of the insurgent "organizational system." In order to deconstruct the insurgent organizational system, this chapter surveys a broad range of literature using a framework founded on three basic propositions: first, that insurgencies demonstrate a common organization behaviors; second, that those behaviors are produced by interaction between the components of their organizational structures; and third, that those structures draw on identifiable requirements in order to fulfill functions.

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[1] John A. Warden, "The Enemy As a System," *Airpower Journal* 9, no. 1 (Spring 1995): 49-55.
[2] Ibid., and John A. Warden, interview with the author, 13 February 2009.

**Behaviors of Insurgent Organizations**

Contrary to modern conventional wisdom, insurgency is not an especially novel phenomenon. At its root, insurgency is a response to being the weaker party in a violent struggle for political power. It is merely a form of violent political competition—war—with its own distinctive character. Jeffrey Record theorizes that a non-state entity will exercise one of two options upon realizing it is the weaker party: either organize a direct defense using conventional force, or organize some segment of a society to impose costs on the stronger party through the use of forces trained to avoid direct conflict.[3] As "an organized movement aimed at the overthrow of a constituted government through the use of subversion and armed conflict," an insurgency is animated by an underlying political disagreement.[4] Insurgents undertake military action as a means to a political end and such violence is subordinate to the political change they seek.[5]

The goal sought by an insurgency is intimately tied to its origins. Insurgencies can arise from perceived or actual electoral inequities, ethnic struggles or other traditions of internal conflict, as outgrowths of attempted coups or revolutions, or as a result of defeat and occupation by an external power.[6] These causes are neither exclusive of one another nor are they all encompassing. Skillful insurgents will employ a blend of these and other causes, emphasizing varying political themes as circumstances dictate.[7] The blending of messages is done to maintain progress toward a political goal, which may range from a conspiratorial drive to seize power from current elites to a protracted popular war

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[3] Jeffrey Record, *Beating Goliath: Why Insurgencies Win* (Washington, DC: Potomac Books, 2007), p. 11.
[4] Field Manual (FM) 3-24, *Counterinsurgency,* December 2006, 1-1.
[5] Ibid., 1-3.
[6] Anthony James Joes, *Resisting Rebellion: The History and Politics of Counterinsurgency* (Lexington, KY: The University Press of Kentucky, 2004), 28.
[7] FM 3-24, *Counterinsurgency,* 1-10.

seeking to undermine and eventually replace a government.[8]  Movements
seeking complete overthrow will tend to conform to a phased approach
such as that put forth and practiced by Mao Zedong, which opens with a
strategic defensive, achieves parity, and culminates in a strategic
counteroffensive.[9]  Other movements, such as those based on unification
around a religious or ethnic identity, may have more modest goals that
do not require military overthrow.[10]  Other insurgencies, undertaken on
the *foco* model put forth by Ernesto Guevara, employ violence as a means
of arousing and focusing generalized popular discontent without
specifying a discrete goal.  In the focoist model, the stated aim of the
revolution only occurs after a general insurrection has taken place.[11]
Warfare of this character, regardless of its specific goal, requires a
distinctive type of warrior.

The "highly politicized irregulars" who conduct insurgency
understand that their success depends on popular mobilization and
make such mobilization the priority of their efforts.[12]  In sharp contrast
to the conventional forces they typically face, insurgents wage war not
only operationally but grand strategically, integrating political,
ideological, diplomatic, and military activities in all of their plans.[13]
From their position, interspersed among the people they seek to
influence, insurgents are poised to exploit constantly the moral
indignation and primal attachment to home territory felt by populations

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[8] Ibid.*,* 1-5.

[9] Mao Tse-Tung, "On Protracted War," in *The Art of War: Special Edition* (El Paso, TX: El Paso Norte Press, 2005), 202-213.  See also Thomas X. Hammes, *The Sling and the Stone: On War in the 21st Century* (St. Paul, MN: Zenith Press, 2006), 46-51.

[10] FM 3-24, *Counterinsurgency,* 1-8.

[11] Che Guevara, *Guerrilla Warfare,* trans. J.P. Moray, eds. Brian Loveman and Thomas M. Davies (Lanham, MD: SR Books, 1997), 101. See also Hammes, *The Sling and the Stone,* 77.

[12] Bernard Fall, "Introduction: A Portrait of the 'Centurion'," in Roger Trinquier, *Modern Warfare: A French View of Counterinsurgency* (Westport, CT: Praeger, 2006)*,* xi.

[13] Colin S. Gray, *Irregular Armies and the Essence of Strategy: Can the American Way of War Adapt?* (Carlisle, PA: Strategic Studies Institute, 2006), 23.

forced to tolerate a "foreign" and often culturally alien presence.[14] Worshipping among countrymen inheres to the insurgent another special advantage—constant access to the most emotionally sensitive and indivisible beliefs of a population, its religious beliefs. This permits the insurgent to co-opt and amplify other antagonisms ideologically, morphing a movement from one based on political change to a more socially and culturally intractable one.[15] The rural tribesmen of eastern Afghanistan, for example, pursued highly segmented tribal lives prior to the Soviet invasion of 1979 but put aside their differences and united around the central idea of defending Islamic tradition in the face of a foreign power.[16] Offending the religious sensibilities of a population can indeed invoke a furious response.[17] Not only will populations be willing to lay aside lesser concerns in support of a perceived violation of religious norms, they may become particularly savage in doing so. Napoleon's army committed religious atrocities during its attempt to subjugate the Iberian Peninsula and suffered a particularly macabre brand of reciprocity in the course of eventual defeat, with French officers boiled in cauldrons and others castrated by the furious *guerrilleros* they had sought to subdue.[18] Insurgents take advantage of their familiarity with the social context of the conflict to incite violence, fan its flames, and mobilize the population.

Insurgents fulfill political goals by imposing themselves upon the population they seek to influence. Tapping into an underlying grievance is not enough to overcome the superior resources of their state-based

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[14] John A. Nagl, *Learning to Eat Soup with a Knife: Counterinsurgency Lessons from Malaya and Vietnam* (Chicago, IL: University of Chicago Press, 2002), xiii.

[15] Robert A. Pape, *Dying to Win: The Strategic Logic of Suicide Terrorism* (New York: Random House, 2006), 167, 216. While Pape's central argument involves the existence of political antagonism at the heart of suicide bombing, he also demonstrates that the risk of suicide terrorism is greater when an occupying power is religiously different than the population it seeks to pacify.

[16] Richard H. Shultz and Andrea J. Dew, *Insurgents, Terrorists, and Militias: The Warriors of Contemporary Combat* (New York: Columbia University Press, 2006), 177.

[17] Joes, *Resisting Rebellion,* 93.

[18] Ibid., 64.

opponent without the introduction of additional means. In order to harness the resources of the population, insurgents employ varying blends of coercion and persuasion to gain legitimacy in the eyes of the population. Insurgent groups often provide services to the population while also controlling them through a measure of fear.[19] To that end insurgents use psychological warfare, including terrorism, in an attempt to demonstrate to the population that the ruling government or occupying power is incapable of protecting them.[20] Insurgents groups use terrorism in concert with propaganda measures to create and feed doubt about the capability of the ruling government.[21] In many cases, insurgents prefer terrorism to open military confrontation because it allows them to exploit the political and psychological dimensions while avoiding decisive military engagements.[22]

That said, insurgents do not avoid military battles, but instead look to capitalize on the advantages inherent in operating in small, dispersed units defending their home soil. Insurgents use terrain, local knowledge, and cultural advantage to dictate the tempo, timing, and number of military engagements.[23] Physical dispersal and the mobility of small units allow insurgents exploit the weaknesses of their larger, less mobile opponent. This advantage is even more apparent when foreign forces occupy. While such occupiers are struggling to orient themselves to the social and political forces, indigenous insurgent forces exploit such knowledge to their benefit.[24] One such benefit involves triggering a disproportionate response from their counterinsurgent foe. By continuing to inflict casualties, while eluding contact, insurgents hope

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[19] David Galula, *Pacification in Algeria: 1956-1958* (Santa Monica, CA: RAND, 2006), v.
[20] Trinquier, *Modern Warfare,* 6.
[21] Ibid.*,* 15.
[22] Steven Metz and Raymond Millen, *Insurgency and Counterinsurgency in the 21st Century* (Carlisle, PA: Army War College Strategic Studies Group, 2004), vii.
[23] Hammes, *The Sling and the Stone*, 73.
[24] Michael C. Fowler, *Amateur Soldiers, Global Wars: Insurgency and Global Wars* (Westport, CT: Praeger, 2005), 9.

that frustration will lead their opponent to either invest more resources or lead to the indiscriminate killing of the population.  Such actions by the counterinsurgent make them look inept or insensitive and further inflame popular disaffection.  Thus, the dilemma for the counterinsurgent is that the harder he tries to solve problems using inordinate physical strength, the more likely he is to provoke alienation among the population he seeks to win over.[25]

Insurgents understand and make use of the temporal dimension in war, using time as a weapon to exhaust the patience of the political leaders and population behind the counterinsurgents.[26]  They understand the domestic politics of invaders and use access to the modern tools of communication to create internal divisions among the polities supporting a counterinsurgent mission.[27]  Fighting on home turf and dedicated politically and morally to their cause, insurgents can emerge victorious in the face of attrition "on a Homeric scale" simply by doggedly pursing their goal against an opponent for whom the conflict may not matter as much.[28]  The Viet Cong, for example, suffered approximately 40,000 killed during the 1968 Tet Offensive, while US losses were extremely modest in comparison.[29]  Nonetheless, Tet was clearly a political setback for the United States.  It called into question the credibility of military claims of battlefield success, changed the political complexion of the war, and further united the insurgents on a clearer path to their goal.

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[25] Nagl, *Learning to Eat Soup With a Knife,* 27-30.
[26] T.E. Lawrence, "The Evolution of a Revolt," in *Army Quarterly and Defence Journal,* October 1920.  CSI Reprint, http://www-cgsc.army.mil/carl/resources/csi/lawrence/lawrence.asp.  Mao, "On Protracted War" in *The Art of War,* 177. See also Record, *Beating Goliath,* 12.
[27] Hammes, *The Sling and the Stone,* 71.
[28] Andrew J.R. Mack, "Why Big Nations Lose Small Wars: The Politics of Asymmetric Conflict," in *World Politics* 27, no. 2 (January 1975), 175-200. See also Gray, *Irregular Armies and the Essence of Strategy*, 23.
[29] Allan R. Millett and Peter Maslowski, *For the Common Defense: A Military History of the United States of America* (New York: The Free Press, 1994), 588.

The insurgent is deeply embedded in the normal functioning of a population.  He is able to hide in plain sight, lay dormant while waiting patiently for opportunities to strike, and often accept heavy losses while retaining the ability to regenerate and fight on.  These properties make the insurgent less like a military machine than a virus.[30]  But while this is a useful way of conceptualizing insurgency, it is equally important to recognize that the complex behaviors outlined above are products of a human enterprise.  This implies a reliance on unified action, and accordingly the need for certain structural elements in order to function.

**Structures of Insurgent Organizations**

A clearly defined goal, patience, and "home field advantage" are not enough to win insurgencies.  Insurgents must organize.  While each insurgency is uniquely constructed according to its specific goals and context, certain structural commonalities are evident and worth exploration.

Insurgent movements, like any organized endeavor, require skilled leadership of some form.  US counterinsurgency doctrine instructs that leaders provide the strategic direction and inspiration for a movement, often through their force of personality and charisma or through pre-existing authority.[31]  This vision reflects a military predilection that romanticizes the idea a unitary leader of exceptional ability, but successful insurgent movements have employed other forms of leadership.  Committee arrangements are one such form.  The Afghan tribal unions that formed spontaneously to fight British and later Soviet occupation provided unitary authority without placing leadership of the entire movement into the hands of one individual.  Leadership in committees requires a greater degree of coordination among its members, but results in greater diversity and empowerment of individuals and

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[30] Fowler, *Amateur Soldiers, Global Wars,* 114.
[31] FM 3-24, *Counterinsurgency,* 1-11.

groups within the organization. Such an arrangement also gives a movement greater survivability by ensuring that the loss of one central figure will not decapitate the entire movement.[32] The French capture of Algerian insurgent leader Ben Bella in 1956, for example, was insufficient to undermine the cause of Algerian liberation; the committee organization of the Front de Liberation Nationale (FLN) allowed it to proceed largely unhindered by this setback. A more recent example of this trend of decentralized leadership can be found in the writings of Muslim extremist Abu Musab Al Suri. Al Suri advocates movements that are leaderless, deriving direction from a simple idea powerful enough to rally unified action without the need for continuous operational control.[33] While their success does not rest exclusively on continuous control and direction from a central authority, insurgencies need some form of leadership to craft and communicate a central message, explain and justify insurgent actions to garner popular support, inform and recruit adherents, and hold the movement together against resistance.[34] Although leadership is critical, many other aspects of organization are important to understanding how insurgencies adapt to their contextual circumstances.

Underneath the leadership elements, most insurgent movements possess a "specially adapted organization" that allows them to impose themselves upon a population for political ends.[35] Such organizations will have both political and military elements skilled in specific functions and contained in specialized, compartmented cells.[36] Links between these elements may exist at various levels within a hierarchy, or between various nodes in a networked structure. The political effort in an insurgency may have more dedicated manpower and resources than the

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[32] Fowler, *Amateur Soldiers, Global Wars,* 38.
[33] Brynjar Lia, *Architect of Global Jihad: The Life of Al-Qaida Strategist Abu Mus'ab al-Suri* (New York: Columbia University Press, 2008), 6-7.
[34] Fowler, *Amateur Soldiers, Global Wars,* 42.
[35] Trinqier, *Modern Warfare,* 4.
[36] Galulua, *Pacification in Algeria,* 19-20.

military effort, and may be performed clandestinely by individuals who live outwardly as ordinary citizens.[37]  French counterinsurgent Roger Trinquier estimated the nature of the supporting structure and the problem of contending with it when he labeled insurgent elements in Algiers "not a few armed bands, but the organization that feeds, informs, and sustains them."[38]  Soldiers tend to think in terms of schedules, times, orders, objectives, phases, and end-states.  Conversely, politicians tend to think in terms of message discipline, votes, communications, ideological positions, and opinion management.  This difference in organizational culture is evident in the premium insurgents place on a close union between military activities and political purpose, with politics at the forefront.

While normally exhibiting some hierarchical traits, insurgencies tend to possess flat organizations with a high degree of decentralization lending them operational agility.  By maintaining a central idea while decentralizing planning and execution, insurgencies take less time than hierarchical bureaucracies to receive and assimilate information, make decisions, organize activities, and execute operations.  Insurgencies give their operational agents the "when and why" of the movement, and allow the actors themselves to decide the "who, how, and where."  Such broad intent and mission-type authority gives local insurgent forces the ability to make best use of local advantage and seize and maintain the initiative.[39]  This ability to act opportunistically helps the insurgent stay ahead of his opponent's disruption efforts.  Decentralization is manifested physically as geographic dispersion, which provides advantages to the insurgent described in preceding section. But while decentralization conveys some agility to insurgent organizations, it is important to recognize the limitations of such an approach.

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[37] Trinqier, *Modern Warfare,* 11.
[38] Ibid., 25.
[39] Fowler, *Amateur Soldiers, Global Wars,* 21.

Insurgencies face an eternal tension between decentralizing operations and unifying the movement toward its ultimate goals. Distributed structures give insurgencies great tactical advantage and operational survivability by allowing fighting in one geographic area to continue despite losses elsewhere.[40] If the political change at the root of a movement is to be realized in concrete terms, however, a movement must alter its emphasis and attempt to govern the population. Mao Tse-Tung understood this when he prescribed an eventual shift from strategic stalemate to counteroffensive, and advised movement participants to feed the roots of new governance continually as they fought through the revolution.[41] Where disparate parties band together in a common cause to fight against an occupying power, unity of effort can be difficult to achieve operationally and strategically.[42] Once the common threat is removed, old factional tensions return and often lead to a struggle between groups for supremacy. Secrecy and compartmentalization are necessary elements of an insurgent movement seeking cover within a host population, but this can impede the flow of communication and create vulnerabilities between groups that an adept counterinsurgent can exploit.

To ensure coordination and the broadcast of their message to the population, insurgents must communicate both internally and externally. Internally, communication provides dispersed elements with general guidance, adjustments to timing, intelligence updates, and coordination for supply and logistical support.[43] Dispersed insurgent forces are capable of operating for extended periods in the absence of coordination so long as the message to external audiences provides a powerful enough idea to generate and sustain operational momentum

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[40] Nagl, *Learning to Eat Soup With a Knife,* 25.

[41] Mao, "On Protracted War," in *The Art of War,* 202-213. See also Hammes, *The Sling and the Stone,* 46-51.

[42] Robert M. Cassidy, *Counterinsurgency and the Global War on Terror: Military Culture and Irregular War* (Westport, CT: Praeger, 2006), 5.

[43] Fowler, *Amateur Soldiers, Global Wars,* 54.

and population support.  The skillful use of propaganda to create perceived legitimacy while undermining that of the opposition makes life easier on the insurgent by creating organic sources of support for the movement.  Communications can serve other purposes as well.  They can convey insurgent threats, fuel belief in the insurgent cause, or marginalize the opposition.  In the most successful insurgencies, effective communication led directly to greater moral and material support from the population and made counterinsurgent attempts at interdicting it virtually impossible.[44]  Information Age technologies have lent new weight to the importance of communication as insurgents with technological know-how can use cyberspace to mobilize, recruit, conduct psychological warfare, export propaganda, and gather financial resources.  Properly wielded, the laptop and broadband connection together form "the greatest weapon in the armory" of the modern insurgent.[45]  But the ephemeral nature of cyberspace cannot erase the concrete realities that an insurgency must face in order to achieve pragmatic aims.

Despite attraction to a shapeless organization, insurgencies cannot remain totally free of tangible structure.  Organized violence requires an infrastructure, however minimal, to bring materiel to the right place at the right time.[46]  North Vietnam supplied the insurgency in the south using the Ho Chi Minh Trail, perhaps the premier example of insurgent supporting infrastructure.  The need for a support infrastructure, regardless of its size or scale, creates the need to operate and sustain it, along with base areas to store its products and link them to points of delivery.  While insurgents typically have a very modest "tooth-to-tail ratio," there is nonetheless some "tail" involved, and with it a supporting

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[44] Trinquier, *Modern Warfare,* 24.
[45] Timothy L. Thomas, "Cyber Mobilization: The Neglected Aspect of Information Operations and Counterinsurgency Doctrine," in *Countering Terrorism and Insurgency in the 21st Century: International Perspectives,* ed. James F. Forest (Westport, CT: Praeger, 2007), 358-379.
[46] Joes, *Resisting Rebellion,* 14.

organizational architecture that must achieve balance between effectiveness and enemy detection.[47]  This limits what insurgents can achieve without either a more concrete organization or free access to a sanctuary that can fulfill logistical needs.  That said, the asymmetry in patience discussed previously favors to the insurgent, who can operate almost indefinitely with little more than food, water, bullets, and a cellphone.[48]

The difficulty in concretely characterizing insurgencies according to their physical structure, given local variations in cause and context, has led some to characterize them systemically.  Roger Trinquier, for example, described the Algerian insurgency he faced as "a system for warfare" and an "armed clandestine organization."[49]  Trinquier grappled for a full appreciation of this system while seeming to understand its unique complexity.  His perspective was preponderantly tactical, while analyst Charles Wolf adopted a more strategic view.  Wolf believed it useful to think of insurgency as a system with inputs and outputs.  In his conception, a leadership element wields functional departments focused on personnel, finance, logistics, and communications in converting civil disaffection, fear, and materiel into sabotage, terror, demonstrations, and attacks.  His model calls for military means to contend with violent system outputs while civil means contend with the inputs.[50]  While this approach reduces much of the complexity visited in this discussion to an unserviceable level, it calls to attention the importance of viewing insurgency holistically rather than fixating on its military dimensions.

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[47] Gray, *Irregular Armies and the Essence of Strategy*, 46.
[48] Fowler, *Amateur Soldiers, Global Wars,* 9.
[49] Trinquier, *Modern Warfare,* 4, 7.
[50] Charles Wolf, Jr., *Insurgency and Counterinsurgency: New Myths and Old Realities* (Santa Monica, CA: RAND, 1965), 10-15.

**Requirements of Insurgent Organizations**

While the behavior and construction of insurgency are difficult to visualize concretely, the requirements for its conduct are easier to discern. The discussion to this point has demonstrated the relationship between the behavioral and organizational aspects of this unique form of warfare. The British officer and author John Frederick Charles (J.F.C.) Fuller organized his discussion of war along the lines of its the mental, moral, and physical spheres. This conceptual approach, which can apply to all forms of war, is a useful means of depicting the various requirements of insurgencies.[51]

**Mental Requirements**. Insurgency begins with a person or group of people acting as *leadership* of a movement. This leadership is armed initially with an *idea* for different government, or with the general idea of political change requiring a violent uprising.[52] The movement's central idea is wholesaled in the form of *political mobilization*, which takes the idea at the seed of the movement and plants it in the field of the population in order to grow more adherents.[53] Some form of political *organization*, modest or complex, is required in order to export and mobilize the idea. With an organized movement, mobilized by a leader and driven by an idea for change, a fledgling insurgency is still incapable of flourishing without *legitimacy*.[54] The idea must be exported with sufficient breadth and power to undermine the legitimacy of the sitting government or occupying power, thereby lending credence to the insurgency's alternative worldview. As an insurgency progresses and deals with the inevitable friction of resistance, it will require a constant flow of *intelligence* information, both as a means of protecting and furthering its violent operations and as a vehicle for assessment of

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[51] John Frederick Charles Fuller, *The Foundations of the Science of War* (London: Hutchinson, 1926), 208-225.
[52] Metz and Millen, *Insurgency and Counterinsurgency in the 21st Century,* 4-7.
[53] Nagl, *Learning to Eat Soup With a Knife,* 23.
[54] Trinquier, *Modern Warfare,* 40.

progress toward political goals.[55]  Throughout the life of an insurgency, a thinking leadership element is required to pursue political change rationally.  Without meeting these requirements, the movement may become too focused on the tactical management of violence, or too reliant on an underlying ideological cause rather than rational closure toward a political end (see Figure 2).

| Requirements for Successful Insurgency Mental Sphere |
|:---:|
| Leadership |
| Idea |
| Political Mobilization |
| Organization |
| Legitimacy |
| Intelligence |

**Figure 2. The Mental Requirements of Insurgency**
*Source: Author*

**Moral Requirements**.  A successful insurgency transforms its foundational idea into a moral *cause*.[56]  This is done through the communication of a coherent and emotional *message* that seeks to inflame the moral passions of potential adherents. Insurgent leaders recognize that while rationality must form the heart of their movement, moral indignation, outrage, and other forms of emotional antagonism are much more viable means of sustaining the violence and disorder needed for their movement to create and seize opportunities for greater power. Thus, the idea at the intellectual heart of the movement is used to create a perceived legitimate cause capable of creating widespread disaffection, thereby altering popular *opinion* and morale to the benefit of the insurgent.[57]  Often, *religious, ethnic, tribal, or territorial sensitivities* will be

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[55] Metz and Millen, *Insurgency and Counterinsurgency in the 21st Century,* 4-7.
[56] Gray, *Irregular Armies and the Essence of Strategy,* 21.
[57] Nagl, *Learning to Eat Soup With a Knife,* 101.

exploited or played upon to stoke the most base and volatile emotions of a population, creating a widespread perception that a population must reject the counterinsurgent or sitting government in order to safeguard its most sacred beliefs.[58]  The exploitation of various forms of group identity can identify an insurgency with deeply-held convictions, manufacturing among adherents a *willingness to suffer* and degree of *patience* that cannot be matched by counterinsurgents and their state sponsors.[59]  This is indeed the moral key to insurgency; if a cause can be manufactured with significant resonance that patient will and a zealous tolerance for suffering are unlocked on a broad scale, an insurgency may prove capable of outlasting even the most ardent opposition no matter the degree of physical or resource disadvantage (see Figure 3).  The American Revolution itself could be so characterized.

| Requirements for Successful Insurgency Moral Sphere |
| :---: |
| Cause |
| Message |
| Popular Opinion |
| Religious/Ethnic/Tribal/National Identity |
| Willingness to Suffer |
| Patience |

**Figure 3. The Moral Requirements of Insurgency**
*Source: Author*

**Physical Requirements**.  While ideas and emotions provide the impetus and sustainment for insurgent movements, they cannot be executed successfully without access to physical resources.  Violent overthrow requires armed *fighters*.  Most of these are *recruited* from disaffected elements of the population.[60]  Troops need *weapons* and

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58 Gray, *Irregular Armies and the Essence of Strategy*, 21.
59 Nagl, *Learning to Eat Soup With a Knife,* 23.
60 Wolf, *Insurgency and Counterinsurgency: New Myths and Old Realities,* 10.

ammunition, *food*, and *knowledge of the terrain* in order to perform effectively.[61]  Feeding and arming troops, maintaining access to media to communicate the message, and gaining access to intelligence from indigenous sources all implies the need for considerable amounts of *money*.  Financing can be achieved organically by coercing payment from the local population, but assuming the cause broadens and gains followers, organic funding will likely require external supplementation.[62]  Insurgencies must also store ammunition, construct weapons of terror, and train new recruits.  These necessities imply the requirement for internal or external *sanctuary*.[63]  Most importantly, insurgents require some degree of support from the population within which they seek to camouflage themselves and conceal their intentions.  For movements to achieve the surprise so critical to creating the psychological shock important to their inherently weaker military position, they need the *secrecy* only attainable through coercion or cooperation of a population.  The *protection* afforded by a silent or actively cooperative population allows insurgents to remain clandestine as many carry on double lives as both citizen and resistance fighter.  This preserves the movement's manpower (see Figure 4).[64]

| Requirements for Successful Insurgency Physical Sphere |
|:---:|
| Troops and Recruits |
| Weapons, Food, Money |
| Knowledge of Terrain |
| Sanctuary, Popular Protection |
| Secrecy |

**Figure 4. The Physical Requirements of Insurgency**
*Source: Author*

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[61] Trinquier, *Modern Warfare,* 53.
[62] Galula, *Pacification in Algeria,* xxi.
[63] Joes, *Resisting Rebellion,* 14.
[64] Trinquier, *Modern Warfare,* 17.

By deconstructing the insurgent organizational system, it is possible to discern the preceding inventory of identifiable requirements. It is also somewhat evident that while difficult to concretely visualize, there are organizational structures responsible for transforming these requirements into the behavior of insurgent organizations. How do these findings square with John Warden's vision of enemy organizations?

**Similarities and Differences in Organizational Visions**

The preceding sections demonstrate key similarities and stark differences between John Warden's organizational vision and the organizational makeup of insurgency. Reconciling these differences and acknowledging these similarities yields a number of interim findings concerning the utility of EAS in explaining airpower in COIN while also fashioning a framework for further investigation.

Insurgent organizational principles appear consistent with Warden's organizational vision in three key ways. First, Warden asserts that all enemies are organizations subject to systemic analysis and exploitation, and insurgency theorists agree.[65] Both Charles Wolf and Roger Trinquier specifically referred to insurgencies as "systems" in their appraisals of the phenomenon.[66] Moreover, the preceding analysis makes clear that not only are insurgencies vulnerable to systemic analysis, but that it is indeed necessary to regard them in that way in order to gain an appreciation for their complex functioning. Second, Warden theorizes that analysis always reveals key vulnerabilities in any enemy system that can be deliberately attacked to disrupt systemic functioning.[67] Insurgencies clearly obey this logic, with a number of identifiable requirements—which constitute targetable vulnerabilities—evident through deconstruction of the phenomenon. Finally, Warden

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[65] Warden, "The Enemy As a System," 44-49.
[66] Wolf, *Insurgency and Counterinsurgency,* 10-15 and Trinquier, *Modern Warfare,* 4.
[67] Warden, "The Enemy As a System," 49-54.

argues that the best way to make war against an organization is to avoid costly confrontations with fielded forces, and advocates instead an approach that strikes directly at key vulnerabilities uncovered through systemic analysis.[68]   The makeup of insurgencies is consistent with this approach.  Insurgent fielded forces constitute only one modest aspect of the overall organization, which is more concerned with political change than military prowess.  These are striking similarities that tend to support Warden's assertion that EAS describes any enemy.  But there are also differences.

Three considerable inconsistencies between Warden's organizational vision and the makeup of insurgent organizations demand greater elaboration.  First, Warden theorizes that the best way to victory in modern war is through the physical attack of key vulnerabilities in an enemy system.[69]  This is inconsistent with insurgency theory, which demonstrates that most of what is required to make an insurgency function is *non-physical.*  Thirteen of the 22 (59 percent) insurgent requirements identified above cannot be physically targeted and this calls into question the preoccupation with physical means—precision aerial attack—in Warden's theory.  Second, Warden proposes that leadership is always the most important subsystem in the enemy's organizational architecture, but insurgency theory undermines this idea.[70]  While leadership is a part of insurgent functioning, it comes in many shapes and sizes in this type of warfare, and disabling it does not necessarily lead to a fundamental disruption of the insurgency.  This is because the *population,* not the leadership, is the most important subsystem in an insurgency.  Classical insurgency theory recognizes population support as the *sine qua non* for victory, and so long as insurgents maintain control over and support from populations, the

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[68] Ibid., 51.
[69] Ibid., 54.
[70] Ibid., 49.

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insurgency is able to continue.  Moreover, leadership in an insurgency is often exercised at the local rather than state level.  Thus, it may not be possible to target leadership without incidentally targeting the population within which it is immersed.[71]  This points to a third significant difference between Warden's vision and the unique organizational realities of counterinsurgency.  Warden regards enemies according to their structures, and believes that approaching the enemy by looking for targets within his structural architecture is the preferred method of analysis.[72]  What is clear from the preceding discussion is that insurgencies cannot be visualized as a collection of targets, that their structural components vary and constantly change, and that their functioning is not a simple product of the functions of subcomponents.  Insurgencies instead function according to a complex set of *relationships* between requirements and structures.  The requirements of insurgency do not array themselves neatly across an organizational architecture such as the FRM.  Instead, they are part of a sophisticated, interdependent, and interrelated set of organizational subcomponents that do not lend themselves to easy visualization or abstraction.  The implications of this difference are significant.  Warden's EAS might lead a strategist to simply target vulnerabilities across an array of subsystems in expectation of organizational paralysis, but to take such an approach in an insurgency could easily produce unintended knock-on effects due to the interconnectedness of the system.  Attacking leadership might impact population targets.  Attacking fielded forces might impact organic essentials.  Simply stated, Warden's theory is more about *structure* while insurgency is indeed a complex *system.*

The key consistencies and inconsistencies exposed by comparing and contrasting Warden's EAS and insurgency theory (summarized in

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[71] Mao Tse-Tung, *On Guerrilla Warfare* (Urbana, IL: University of Illinois Press, 2000), 93. "The people are like water, and the insurgents are like the fish who inhabit it."
[72] Warden, "The Enemy as a System," 49.

Figure 5 below) are useful in constructing a framework for the historical investigation of airpower in COIN.

| Warden's EAS vs. Theory of Insurgent Organizations | |
|---|---|
| **Key Consistencies** | **Key Differences** |
| • Enemy Organization Subject to _Systemic Analysis_ and Exploitation | • Enemy Requirements & Vulnerabilities Predominantly _Non-Physical_ |
| • Enemy Has _Targetable Vulnerabilities_ | • _Population_, Not Leadership, is the Key Enemy Subsystem |
| • Defeating _Fielded Forces Not the Key_ to Defeating the Enemy | • Enemy Behavior _Not Structure-Driven, But Driven By Links_ Between Requirements and Subsystems |

**Figure 5. Synthesizing Organizational Visions**
_Source: Author_

## Conclusion: An Emerging Analytical Framework

The foregoing discussion has produced two distinct but related views concerning warfare against insurgent organizations. The first, John Warden's EAS, attempts to marry the promise of airpower to the ideas of systems analysis and organizational structure by using enemy subcomponents and vulnerabilities to inform a process of physical targeting. The other is informed by a broad base of insurgency theory and imagines the enemy as an interdependent system of requirements and subcomponents. In this vision, insurgencies are predominantly non-physical in nature and too structurally complex to be approached a collection of targets.

This chapter suggests that a conditioned version of Warden's theory is serviceable as a framework for analyzing the role and relevance of airpower in COIN. This framework accounts for the basic tenets of Warden's approach while accounting for the key differences between his

organizational model and the unique qualities of insurgent organizations. The remainder of this study will use the framework developed in this chapter as an investigative lens in examining three historical cases of airpower in COIN.  The framework consists of the following questions:

1. How was airpower applied against key vulnerabilities within each of the five rings in Warden's FRM?
2. Did airpower operations against fielded forces reflect an understanding of the role of fielded forces in the insurgent organizational system?
3. Did airpower operations against leadership reflect an understanding of the role of leadership in the insurgent organizational system?
4. Did airpower operations against the population subsystem reflect an understanding of the role of the population subsystem in the insurgent organizational system?
5. Did the level of physicality of airpower operations reflect the non-physical nature of insurgent organizations?
6. How did airpower operations create changes in the organizational behavior of the insurgency?  What links between subsystems and requirements were demonstrated to exist through the creation of indirect effects resulting from airpower operations?
7. Did airpower operations against the insurgency derive from a systemic analysis of the enemy organization?  If not, how might operations have differed had such analysis informed them?

The framework outlined above will be applied to three distinctive cases of airpower in COIN: the French-Algerian War, the Vietnam War, and the Soviet-Afghan War.  Each case involves a distinct insurgent organization, diverse strategic cultures, and varying airpower technology and weight of effort.  Notably, each case involves the defeat of an established power that had access to a tyranny of airpower capability over its insurgent opponent.  How could each of these powers—in two cases, superpowers—suffer defeat against upstart rebellions while in

possession of the clear advantage afforded by airpower?  The goal of this next series of analyses is to address that question.

# Chapter 4

## The French-Algerian War, 1954-1962

*As long as you keep Algiers, you will be constantly at war with Africa; sometimes this war will seem to end, but these people will not hate you any the less; it will be a half-extinguished fire that will smolder under the ash and which, at the first opportunity, will burst into a vast conflagration.*

*--Baron Lacuee, 1831*

In 1954, after more than a century of peaceful French occupation, Algeria sought independence. Various groups with the common goal of ending French rule united to create the *Front de Liberation Nationale* (FLN),[1] which undertook a campaign to channelize popular energy toward ending colonial subjugation. FLN violence against French settlers (*pied noirs*) was met with a resolute French response that sought to crush upstart rebellious designs in a territory officially regarded as an organic extension of France rather than a colony. The French set about restoring order, punishing the guilty, eliminating any appearance of weakness, and separating the "healthy elements" of the Algerian population from the "unhealthy" ones.[2] This human sorting problem set France on the bloody and frustrating path of an eight-year counterinsurgency campaign that ended with military success but political failure.

The military success achieved by France in Algeria came about as a function of adaptation over time. After a sluggish initial response, France adopted a strategy of physical isolation and *quadrillage* (sectioning). Grasping the importance of external assistance and sanctuary to the FLN, the French constructed barriers (*barrages*) along

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[1] The FLN's military wing was known as the *Armee de Liberation Nationale* (ALN). For simplicity, this study will use the term 'FLN' interchangeably to mean the political movement and its military arm.

[2] Alistair Horne, *A Savage War of Peace: Algeria 1954-1962* (New York, NY: Penguin, 1987), 97.

the borders of Tunisia and Morocco, geographically isolating the conflict. Meanwhile, the Algerian countryside was pacified with an expanded troop presence and coherent civil-military initiatives.  Together, these measures produced a favorable military stalemate by the end of 1958.[3] The military effort was then culminated and taken on the mobile offensive by new French leadership.  By the end of 1959, the FLN was military broken.  The role of airpower in this favorable military decision was a significant one.

Like the larger military effort, French airpower was uniquely adapted to the character of the struggle.  In 1954, the French Air Force (FAF) had a single rented helicopter stationed in Algeria.[4]  As French leaders became increasingly attuned to the potential of airpower, more air weapons and airmen were infused.  By 1959, 1,067 aircraft were on-hand, to include more than 400 helicopters.[5]

The French used airpower in a wide variety of ways in Algeria, becoming more imaginative with time.  Throughout the war, the mobility and versatility of airpower were at a premium.[6]  Every aircraft in the arsenal was capable of reconnaissance, most were capable of transport, and many demonstrated effectiveness in kinetic roles.[7]  The selection of FAF General Maurice Challe to command the overall military effort in 1959 signaled an increasing reliance on the creative application of combined arms to contend with a stubborn and agile insurgency.[8]  By war's end, the French had come to rely heavily on airpower to enhance

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[3] Paul A Jureidini. *Case Studies in Insurgency and Revolutionary Warfare: Algeria 1954-1962* (Washington, DC: The American University Special Operations Research Office, 1963), 53.
[4] James S. Corum and Wray R. Johnson, *Airpower in Small Wars: Fighting Insurgents and Terrorists* (Lawrence, KS: University Press of Kansas, 2003), 165.
[5] A. H. Peterson, G.C. Reinhardt, and E.E. Conger, eds., *Symposium on the Role of Airpower in Counterinsurgency and Unconventional Warfare: The Algerian War,* RAND Memorandum RM-3653-PR (Santa Monica, CA: RAND, July 1963), 21.
[6] Charles R. Schrader, *The First Helicopter War: Logistics and Mobility in Algeria, 1954-1962* (Westport, CT: Praeger, 1999), 101.
[7] Corum and Johnson, *Airpower in Small Wars,* 166.
[8] Martin S. Alexander and John F.V. Keiger, eds., *France and the Algerian War 1954-1962: Strategy, Operations, and Diplomacy* (London: Routledge, 2002), 201.

the mobility of its army, increase its awareness of enemy activities, and to support its army with Close Air Support (CAS), direct attack, interdiction, envelopment operations, air and ground force escort, spotting, casualty evacuation, combat rescue, and many other roles. Operational execution happened within a flexible and decentralized command-and-control (C2) architecture.[9]

Airpower played a substantive role in the Algerian War, but understanding the degree to which it provided the French with any type of advantage over the FLN requires a deeper examination. The following discussion focuses on how airpower was applied against the FLN, with the goal of exploring and uncovering larger lessons concerning the role and relevance of airpower in COIN.

## Airpower and the Five Rings of the Enemy

*Fifth Ring: Fielded Forces.* French airpower was noticeably concerned with the FLN's fielded forces, and contributed significantly to awareness of FLN movements through broad and persistent aerial reconnaissance. Throughout the war, French aircraft maintained a constant presence in the Algerian skies, gathering details concerning the movements and behavioral patterns of people on the ground.[10] These details gave the army warning of FLN infiltration into new areas without requiring a ground presence across the whole of a Texas-sized territory.[11] Almost one-third (30.3%) of all aerial missions flown in 1958 and 1959 were flown for reconnaissance and intelligence purposes, implying that French aerial reconnaissance served as a proxy for a much larger and likely impracticable ground force.[12]

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[9] Peterson, Reinhardt, and Conger, eds., *RAND Symposium on the Role of Airpower,* 22.
[10] Ibid., 32-33.
[11] Alexander and Keiger, eds., *France and the Algerian War 1954-1962,* 69.
[12] James T. Conway and Michael S. Patrow, *The Algerian War 1954-1962,* Defense Technical Information Center Report (Alexandria, VA: Defense Logistics Agency, June 1983), 47.

Not all aerial efforts against fifth-ring targets were designed for passive awareness. FAF fighters often flew high-speed, low-altitude passes over suspected enemy areas in an attempt to surprise insurgents on the move before they could disperse.[13] This information was used to construct search-and-destroy missions designed to physically disrupt the FLN. Such operations became inherently joint efforts as the French struggled for effectiveness across vast distances and in rugged terrain. Pre-sweep surveillance runs, airborne direction of ground forces, and convoy protection helped shepherd ground forces into position to contend directly with rebels.[14] Ground troops enjoyed the persistent cover of "flying field guns" and the quick availability of airborne reinforcements, both outgrowths of a constant aerial presence that helped ground forces maintain near-constant contact with FLN formations.[15]

While intelligence and direct supporting firepower were important roles for airpower against FLN fielded forces, the rapid mobility provided by French airpower was a true force multiplier. During *quadrillage,* when most French army troops were devoted to localized population security, air mobility allowed small troop formations to continue a series of modest counteroffensives against dispersed FLN bands. This was instrumental in the prevention of internal sanctuaries or losses of pacified territory to the constantly shifting FLN.[16] This flexible arrangement, with a fixed army presence sustained by aerial resupply and a smaller mobile force using airpower to isolate and envelop increasingly desperate FLN forces, illustrates a close relationship

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[13] Aerospace Studies Institute, "Guerilla Warfare and Airpower in Algeria, 1965-1960," Maxwell AFB, AL: Air University, March 1965, 51.

[14] Peterson, Reinhardt, and Conger, eds., *RAND Symposium on the Role of Airpower,* 60-61.

[15] Alexander and Keiger, eds., *France and the Algerian War 1954-1962,* 13.

[16] Edgar O'Ballance, *The Algerian Insurrection, 1954-1962* (London: Faber and Faber, 1967), 64-65.

between the smart use of air transport and the significant stemming of revolutionary violence by the end of 1958.[17]

This downturn in rebel vitality was not attributable completely to the responsiveness of air mobility. Kinetic airpower played a prominent role in French efforts against enemy fielded forces. Having recruited many new members into their movement since the initial uprising, FLN leaders began culminating their efforts in late 1957 by orchestrating major engagements at battalion strength. French airpower, combined with artillery and armor, severely mauled FLN forces presenting themselves in such an approachable manner. Classic combined arms firepower decisively defeated massed FLN forces at Collo, Ouarensis, and a number of other battles during this period.[18] While this physically weakened the FLN, it also reinforced the French predilection for hunting and killing insurgents as a means of contending with the human sorting problem it faced. With the end of 1958 came a new phase in the war that did little to temper the French appetite for efforts against fielded forces.

The orchestration in 1959 of *Plan Challe,* the largest collective French military effort of the Algerian War, brought massive resources to bear against the FLN in a climactic sweep designed to crush remaining resistance. In a series of nine large sub-campaigns that swept the Algerian countryside from west to east, Plan Challe leveraged the rapid mobility and firepower of the FAF in support of a decisive ground operation that killed or captured 40% of the FLN resistance, diminishing rebel morale and sealing a military victory.[19] *Plan Challe* made heavy use of helicopter airpower. Armed helicopters provided airborne C2 and forward reconnaissance, while transport helicopters ferried ground forces over difficult terrain to deliver them into battle free of fatigue. This

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[17] Jureidini. *Case Studies in Insurgency and Revolutionary Warfare,* 53.
[18] Ibid., 95.
[19] James S. Corum, *Bad Strategies: How Major Powers Fail in Counterinsurgency* (St. Paul, MN: MBI Publishing Company, 2008), 72.

combination of power projection and battlefield coordination broke the military back of the FLN, with 3,746 insurgents killed in the first nine months of 1959.[20]  During this period, more than 48,000 French troops were combat-landed into contact with the enemy, demonstrating a correlation between the use of air mobility and the degree of ground lethality achievable.[21]  Overall, *Plan Challe* was an impressive showcase of the asymmetric tactical and logistical mobility achieved by the FAF over the flightless FLN.

Additional examples of airpower participation in operations against the fifth ring are worthy of mention.  As one element of his innovative approach, General Challe commissioned a ground unit to live and operate in ways mimicking the patterns of life and operations demonstrated by the FLN.  Challe's *Commandos de Chasse,* in groups of 60 to 80 men designed to mirror the FLN's *katiba* formations, operated in the Algerian wilderness for weeks at a time, patiently hunting FLN rebels while maintaining contact with French command.  These groups were inserted, sustained, and extracted almost exclusively by airpower, and literally depended on aerial re-supply for survival when living off the land proved insufficient.[22]  These troops were highly effective in tracking and isolating rebel bands that would then be hemmed in and neutralized with larger groups of aerially delivered shock troops.[23]  Indeed, at the apex of the war's intensity, roughly 600 troops were being delivered every day across Algeria by approximately 50 helicopters.[24]  This represents a massive weight of airpower effort devoted to the capturing or killing of fielded forces.

***Fourth Ring: Population.*** French efforts to curtail violence within Algeria led to a temptation to kill every insurgent.  This in turn led to

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[20] Corum and Johnson, *Airpower in Small Wars,* 172.
[21] Schrader, *The First Helicopter War*, 124.
[22] Peter Paret, *French Revolutionary Warfare from Indochina to Algeria: The Analysis of Political and Military Doctrine* (New York: Praeger, 1964), 37.
[23] Horne, *A Savage War of Peace,* 335.
[24] Schrader, *The First Helicopter War*, 123.

airpower applications that incidentally targeted the population. The construction of *barrages* on the Tunisian and Moroccan borders succeeded, as will be discussed later, in effectively isolating the FLN, which was then mangled militarily by *quadrillage* and Plan Challe. But as FLN desperation increased, attempts at border incursion or cross-border escape became more common, and French responses, which often showcased airpower, became more severe. The pursuit of FLN bands across the Tunisian border using air attacks and helicopter-delivered pursuit troops strained diplomatic relations between France and Tunisia during the early stages of the war.[25] As these tensions grew and Tunisian border troops grew more sensitive to violations of sovereignty, operations on the border became increasingly sensitive. The situation became vulnerable to an explosive overreaction by one or both sides. That overreaction came on February 8, 1958.

In response to the shoot-down of a French aircraft along the *barrage* separating Algeria and Tunisia, the FAF launched a reprisal raid on the Tunisian village of Sakiet, which the French believed to have accommodated rebels. In adopting the concept of *collective responsibility* as a means of deterring further rebel support, the FAF achieved negligible military gains while killing 63 Tunisians, including 25 children.[26] The raid, which ironically did not kill a single Algerian, was carried out using a formation of B-26s, implying that destruction of the village was the military objective rather than discriminate attack.[27] As a result of this application of kinetic airpower, the Tunisian government broke off diplomatic relations with France, recalled its envoy to Paris, and expelled French diplomats. The bombing vaulted to the top of the agenda of the United Nations Security Council, which pressured France to accept a settlement brokered by England and America ceding four

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[25] Abder-Rahmane Derradji, *Algerian Guerrilla Campaign Strategy and Tactics* (Lewiston, N.Y: Edwin Mellen Publishers, 1997), 198.
[26] Conway and Patrow, *The Algerian War 1954-1962*, 81.
[27] Corum and Johnson, *Airpower in Small Wars,* 172.

French airbases along the border to Tunisia. In accepting this settlement, the French government lost some of the loyalty of its *pied noirs* and introduced tension into its civil-military discourse.[28] The use of airpower against flightless opponents in this case proved disadvantageous, in part because it violated international norms of morality and sovereignty. But not all French airpower efforts in the fourth ring were so disastrous.

French pacification efforts were sometimes nuanced efforts to positively shape population behaviors and separate the "good guys and bad guys." Select villages were swarmed with helicopter raiding parties that would secure the town before loading up groups of villagers and transporting them to remote locations where they were interrogated. Away from the watchful eyes of fellow villagers who might be supportive of the FLN, innocent Algerians were more cooperative in providing intelligence that aided France's sorting problem.[29] When groups of villagers returned, they were noticeably smaller, with confirmed FLN sympathizers and insurgents having been transported to confinement areas. This technique was accompanied by sophisticated influence operations that relied on aerial loudspeaker missions and mass leaflet drops to reassure cooperative populations.[30] The messages in these leaflets extolled the greatness of France, communicated France's respect for Algerian Muslim institutions, and reassured citizens as to France's genuine desire to create a new, integrated Algeria.[31] More than 2 million such leaflets were distributed during the March 1957 campaign that defeated the FLN network in Algiers, demonstrating an important role for airpower in popular persuasion efforts.[32] But not all leaflets distributed by the FAF in Algeria were designed to reassure. Some carried messages

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[28] Conway and Patrow, *The Algerian War 1954-1962*, 81-83.
[29] Peterson, Reinhardt, and Conger, eds., *RAND Symposium on the Role of Airpower,* 44.
[30] Paret, *French Revolutionary Warfare from Indochina to Algeria,* 56.
[31] Jureidini. *Case Studies in Insurgency and Revolutionary Warfare,* 53.
[32] Paret, *French Revolutionary Warfare from Indochina to Algeria,* 60.

of deterrence and physical threat to suspected FLN strongholds and suspect border areas.[33]  The ambivalence demonstrated by these varying messages reinforces the thin conceptual line between working for the support of populations and inadvertently turning them against the forces of order.  Operations against infrastructure targets were less ambiguous for the FAF.

*Third Ring: Infrastructure.*  Air operations against the infrastructure of the FLN were vital to the military outcome of the war. French airpower was applied against the FLN infrastructure in a variety of ways that are worthy of closer investigation.

In general, the constant presence of aerial patrols served to restrict the freedom of movement of FLN rebels.  This disrupted insurgent communications, hampered timely re-supply, and isolated the FLN from population centers, thereby restricting its ability to achieve political mobilization and foment a broader uprising.[34]  Interrogations of captured rebels revealed that villagers noticing increased aerial presence in a given area were likely to conclude that a military operation was impending, and would ask rebels hiding in the village to move elsewhere.  This type of disruption was compounded by the fact that the insurgents themselves took extra precautions in the face of constant surveillance, reducing the size of their groups in order to avoid detection.  This reduced the fighting potential of individual formations.[35]  This example of the generalized effect of constant presence on rebel infrastructure is reinforced by the impact of specific air operations, such as the seizure of a huge weapons cache from the smuggling ship *Athos,* which was boarded after detection by maritime aerial surveillance.[36]  This was harmful to FLN designs, but not nearly so much as FAF border operations.

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[33] Corum and Johnson, *Airpower in Small Wars,* 63.
[34] Ibid., 168-169.
[35] Alexander and Keiger, eds., *France and the Algerian War 1954-1962,* 75-76.
[36] Horne, *A Savage War of Peace,* 158.

The French system of barrages showcased airpower as a prominent element in the successfully isolation of the FLN. The *Morice Line*, spanning the 200-mile Algerian-Tunisian border, used a system of walls, fences, barbed wire, mines, and patrols to limit incursions. Robust aerial surveillance permitted successful guarding of the line with 25,000 troops, a deep discount from what would have been otherwise required.[37] Airpower provided the mobility necessary to hunt down and eliminate interlopers insistent on springing the trap. Response times were routinely less than one hour, and all mobility aircraft were collocated with response troops.[38] Insurgents successful in breaching the line were typically isolated and observed by an aerial and radar cordon until heliborne troops could arrive and deliver the decisive blow.[39]

The French barrage strategy helped create the conditions for a military victory within Algeria by rendering FLN infrastructure ineffective. A noticeable trend emerged in early 1958 demonstrating that more fighters were defeated and more weapons captured as more attempts were made to break the line. This was primarily due to the asymmetric mobility advantage enjoyed by French troops in the interception and hunting of infiltrators. The Souk-Ahras campaign of April 1958 stands as a vivid example of this advantage. An increasingly desperate FLN, having failed to achieve meaningful infiltration with small bands of fighters and hoping for French timidity in the wake of the Sakiet reprisal, attempted a mass breach intended to overwhelm French response capabilities. Like other attempts, this failed. The French captured 620 rebels, largely due to the superior mobility of heliborne troops.[40] The Souk-Ahras campaign culminated French isolation efforts along the Morice Line, which were instrumental in the death or capture of more than 6,000 FLN rebels and the seizure of more than 4,300 weapons by

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[37] Conway and Patrow, *The Algerian War 1954-1962*, 48-49.
[38] Peterson, Reinhardt, and Conger, eds., *RAND Symposium on the Role of Airpower,* 34.
[39] Horne, *A Savage War of Peace,* 265.
[40] Ibid., 266.

the end of April 1958.[41]  Air operations against the second ring of the FLN were less concrete in their outcomes.

*Second Ring: Organic Essentials.*  There is little evidence that French military leaders sought a direct role for airpower in targeting FLN organic essentials, although a few poignant examples of such operations are part of the Algeria story.  The presence of air patrols served as a constant reminder of French authority to wavering Arab and Berber hearts and minds, and air support of *quadrillage* helped reduce the degree of internal sanctuary available to FLN rebels, thereby reducing fuel for their movement. [42]  These direct applications, however, represent a modest weight of effort.  Given the degree of insurgent vitality resident in the second ring, this significant mismatch in French airpower distribution invites further discussion.

While airpower was used sparingly by the French in direct efforts to influence or neutralize second ring subsystems lending fuel to the FLN insurgency, airpower did generate a number of indirect effects.  The weapons, food, and money required for insurgent operations were successfully interdicted to a significant degree by the French barrage system, which made extensive use of airpower.[43]  The protection required by rebels seeking to hide among the population was disrupted by constant French aerial presence, though the extent of this impact is difficult to discern.[44]  In seeking to secure the population, French airpower employed leaflet and loudspeaker operations designed to bolster authority and legitimacy.[45]  Still, this effort was targeted more at shaping population behavior than addressing the cause, idea, and group identity at the heart of the FLN movement.  To what extent airpower can directly contribute to such influence operations is a question yet in need of

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[41] Jeffrey Record, *Beating Goliath: Why Insurgencies Win* (Washington, DC: Potomac Books, 2008), 59-60.
[42] Alexander and Keiger, eds., *France and the Algerian War 1954-1962,* 13.
[43] Record, *Beating Goliath,* 59-60.
[44] Corum and Johnson, *Airpower in Small Wars,* 168-169.
[45] Paret, *French Revolutionary Warfare from Indochina to Algeria,* 56.

further exploration.  However, the record of Algeria demonstrates that the indirect effects of airpower upon the second ring are not always positive, and can be difficult to control.

French airpower applications against fielded forces incidentally harmed the population, in turn feeding rather than starving the organic essentials required for the FLN to function.  The use of air mobility and aerial surveillance to isolate and pacify Algeria helped moderate the level of violence achieved by the FLN, but these airpower functions were not directly focused on undermining the FLN movement so much as they were focused on shaping and exercising violence against FLN fighters.[46] The fighters themselves, rather than the movement animating their activities, became the focus of French combat power.  When kinetic airpower was used directly against insurgents, the focus was on piling up enemy dead rather than starving the FLN movement of its purpose.  This focus on killing, designed to eradicate Algeria's irreconcilables in order to create the conditions for a settlement, too often fostered an indiscriminate application of airpower that made the French appear heavy-handed.  France's reliance on violence often reinforced the image of colonial subjugation and religious disrespect used by the FLN to sustain its central cause and succeed in recruitment.  When French airpower was used directly against population centers considered collectively responsible for insurgent attacks, the impact on insurgent organic essentials was profound.  French reprisals such as the B-26 attack on Sakiet broadly and publicly called into question the moral legitimacy of French presence and conduct in North Africa, which lent legitimacy to the FLN movement in the hearts and minds of international observers.  The application of French airpower against the organic essentials of the FLN is thus a story of both intentional and

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[46] O'Ballance, *The Algerian Insurrection,* 64-65.

unintentional effects.  Efforts against leadership followed a similar pattern.

***First Ring: Leadership.***  French airpower operations targeting FLN leadership occupied a modest weight of effort, but created disproportionately significant results.  Enjoying the asymmetric advantage of air superiority over all of Algeria, FAF commanders acted opportunistically when they learned of the travel plans of a rebel leader. In October 1956, FAF commanders ordered the hijacking and forced diversion of a charter plane transporting rebel leader Ahmed Ben Bella through Algerian airspace on a trip from Morocco to Tunisia.  Capturing Ben Bella and charging him as a criminal would theoretically remove key direction and control from the FLN, help undermine legitimacy for the liberation movement, and appease European settlers whose support would be necessary if France were to retain possession of the country.[47]

The operation was successful, but proved to be a Pyrrhic victory. Five key rebel leaders were captured and confined for the duration of the war, but the effects were largely unfavorable to France.  As a result of the international controversy that arose from France's unlawful intercept of a civil aircraft, the French ambassador to Tunis resigned, both Morocco and Tunisia recalled their envoys from Paris, and the Sultan of Morocco expressed public outrage.  Ben Bella and his party had been official guests of the Sultan, and interception of their flight was a violation of the guest-host relationship sacred in Muslim culture.  Ben Bella had been a comparatively moderate voice in the FLN, and was captured on his way to the Tunis Conference, where he had hoped to balance the message of prevailing FLN hard-liners with a tone of conciliation.  Initiatives seeking a peaceful resolution of the still young conflict were severely hampered by his capture, which allowed FLN hardliners to express outrage at France's unlawful actions and muted the voice of a key negotiator.

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[47] Horne, *A Savage War of Peace,* 159.

Algerian nationalists soon closed ranks and rejected further overtures for negotiation. The war lengthened, and the insurgency strengthened.[48] This example illustrates that operations against leadership were not a panacea for organizational paralysis in Algeria.

The preceding evidence demonstrates how France used airpower against vulnerabilities in each of the subsystems in the organizational architecture of the FLN. While this factual arrangement reveals the basic character of counterinsurgent air operations, understanding how those operations played a role in the outcome of the war requires a systemic analysis.

**Airpower and the Enemy Organizational System**

The role and relevance of French airpower in the Algerian War is best understood as a function of how it interacted with the FLN organization at the system level. Exploring the degree to which French air operations reflected an understanding of insurgent organization is a useful means of tying French airpower to the overall outcome of the COIN campaign in Algeria.

French airpower was most often used to conduct or support direct engagement with FLN insurgents, and this demonstrates a lack of understanding of the role of fielded forces in the insurgent organizational system. The vast majority of French sorties were flown for one of three reasons: to discern the movements of rebels in order to construct direct operations against them, to deliver troops directly into contact with rebels, or to sustain dispersed forces in order to facilitate continuing enemy contact. The cumulative weight of such efforts stands in tension with the fact that fielded forces represent only a modest fraction of the overall functioning of an insurgency, which draws heavily on non-

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[48] Conway and Patrow, *The Algerian War 1954-1962*, 50.

physical requirements and is animated by political change rather than military prowess.

FAF operations against leadership targets, most notably the capture and imprisonment of Ben Bella, reflected an oversimplified notion of the role of leadership in an insurgent organization. French leaders authorizing the operation clearly felt the capture of a rebel leader would undermine the insurgency to a degree worth the risk of a high-profile violation of international norms. The reward proved much more modest and the risk much more severe. The FLN was less dependent on central leadership than on a central message and animating cause, and the French action thus had little effect on FLN functioning. In achieving no measurable advantage, France meanwhile sacrificed credibility by showing a willingness to set aside international law for military gain. This anecdote demonstrates that counter-leadership operations in COIN must be undertaken with careful consideration of larger political, military, international, and social contexts. It also implies an inherent political sensitivity attached to the use of airpower against opponents who do not possess it and thrive on making their adversary appear unsporting or heavy-handed.

The theme of impunity also characterized French operations against population targets, illustrating a misunderstanding of the basic calculus of the COIN enterprise. Despite noticeable attempts to approach population targets with nuance, the French could not escape a reciprocal mentality. FLN ambushes of French patrols invariably led to reprisal attacks on villages suspected of harboring insurgents. French commanders applying the standard of collective responsibility used airpower in direct action against the population as a means of getting at insurgents. Commanders felt an understandable duty to protect their soldiers from attacks viewed as cowardly in character, and struggled with the difficulty of never knowing from where the next attack would come. The seductive desire for certainty in this environment led to the

destruction of entire suspected safe havens under the mantra of "[t]he mechta I can't defend, I must destroy."[49]  Insurgencies require population support for basic functioning, and airpower attacks victimizing civilians tended to drive more Algerians to the FLN cause, demonstrating a failure to carefully consider the use of airpower in a different kind of war.

The level of physicality evident in French airpower operations was inconsistent with the largely non-physical nature of insurgent requirements.  The widespread use of helicopter gunships and airborne troops in reprisal attacks during the early years of the war tended to undermine counterinsurgency efforts by creating larger numbers of irreconcilable Algerians.  The invocation of collective responsibility led to a visible aerial role in the destruction of villages deemed insecure, as well as the incidental victimization of innocent Algerians caught in the crossfire.  This made airpower a contributor to the cycle of reciprocity that spun the Algerian crisis into a full-blown and savage war.[50]  While the FAF flew great numbers of mobility, surveillance, and presence sorties showcasing non-kinetic airpower functions, the French clearly took an approach that used a majority of physical methods against a predominantly non-physical phenomenon.  This fallacious approach looms large in the strategic outcome of the Algerian War.

The 1958 raid on the Tunisian village of Sakiet is a signal demonstration of the high risks and high stakes associated with kinetic airpower in COIN.  This aerial reprisal sought to deter further incursions by destroying an entire village, leveling a school, and killing scores of civilians on a busy market day.  The high public profile of the attack, amplified by the use of airpower, made villains of the French and victims of their adversaries.[51]  Sakiet provoked United Nations intervention,

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[49] Horne, *A Savage War of Peace,* 114-115.
[50] Ibid., 114-115.
[51] Corum and Johnson, *Airpower in Small Wars,* 172.

raised the international profile of the war, and handed the FLN its biggest propaganda victory.[52]  On balance, French kinetic airpower did more harm than good to COIN efforts in Algeria, and little evidence exists to demonstrate lucid consideration of the non-physical nature of the FLN insurgency, which might have guided a less kinetic approach.

The role of French airpower in Algeria can be understood as a series of FLN organizational behaviors emerging from the interplay of French airpower and targeted FLN subsystems.  When the FAF targeted fielded forces, operations also tended to degrade FLN infrastructure by robbing the organization of couriers, sustainers, reinforcements, and communicators.  This implies a positive link between the fifth and third rings. Operations that killed large numbers of enemy fighters also demonstrated resolve to the population, undermining FLN legitimacy by making it appear the FLN would lose the war.  This implies positive links between direct operations in the fifth ring and indirect effects in the second and fourth rings.  However, many of the system behaviors generated by French airpower took the counterinsurgency further from its goals.  Fifth ring operations alienated the population when civilians were caught in the crossfire, implying a negative link between the fifth and fourth rings.  Civilian deaths also tended to feed the FLN cause, enhance the recruitment of adherents, and feed the FLN propaganda machine with considerable ammunition with which to convey a message of French subjugation and insensitivity.  Air operations against population targets often killed numerous insurgents, but more often than not, population targeting brought more money, weapons, supplies, and fighters to the FLN cause.  This implies that the link between the fifth and fourth rings in the FLN system continued as a link from the fourth to the second ring, and that this latter link was extremely sensitive to indiscriminate airpower effects.

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[52] Derradji, *Algerian Guerrilla Campaign Strategy and Tactics,* 198.

The behavior of the FLN organizational system when subjected to French airpower followed two discernible patterns that help explain the outcome of the Algerian War. First, kinetic airpower targeting FLN fielded forces impacted the Algerian population, which became increasingly resistant to French efforts to gain popular allegiance. Second, kinetic airpower effects against population targets inflated the organic essentials available to the FLN, greatly enhancing the cause, message, and legitimacy of the insurgency. Thus, despite great success in isolating and militarily pacifying Algeria, French airpower failed to account for key relationships between and among FLN organizational subsystems that created unpredictable and unfavorable changes in enemy behavior. The failure of French airmen to account for the relationship between airpower operations and enemy system effects resulted in an insurgency with sufficient political strength to overcome its military disadvantage.

**Conclusion**

The legacy of French airpower in Algeria is one of promising potential, anecdotal success, and eventual strategic failure. Tactically, the FAF showcased a number of airpower innovations that seem favorably suited to the unique challenges of COIN. A generally inverse relationship between the intensity of air mobility operations and the level of insurgent violence suggests a premium on force projection against an agile enemy. Presence operations were another bright spot, with constant aerial policing forcing FLN rebels to maneuver in reduced strength and undermining the willingness of civilians to support and shelter insurgents. However, these tactical adaptations could not turn the tide of a flawed approach.

French airpower was ultimately as net disadvantage in Algeria because of the manner in which it was applied. Twin strategic pathologies involving excessive focus on fielded forces and excessive

physicality colored FAF operations, in defiance of the nature and characteristics of the enemy.  French airmen failed to account for the complex behavior of an insurgency, and unwittingly made the insurgency morally and mentally stronger in heavy-handed attempts to make it physically weaker.  Destructive operations targeting one aspect of the insurgency often produced disproportionate and disadvantageous consequences in another area, suggesting a particular sensitivity of insurgent organizations to the application of kinetic airpower.  In failing to consider the political and perceptual sensitivity of employing an asymmetric capability, France failed to shape its airpower accordingly. This helps explain why French legitimacy continually eroded throughout the war as the FLN strengthened politically despite military defeat.

The most valuable conclusion evident from the French airpower experience in Algeria is that the absence of a deliberate approach severely limited French strategic horizons.  The findings decoded through use of the EAS lens illustrate a key takeaway: an air force approaching COIN absent a grasp of how an insurgency operates will likely be seduced by its own talents, which most often involve the exercise of heavy aerial firepower.  France did not apply a systematic analytical lens to the FLN, and consequently failed to shape airpower into the scalpel needed for COIN.  French airpower instead came to symbolize a brutal hatchet and this contributed to French political and strategic defeat. Expedient application of airpower in an insurgency carries the risk of severe consequences, to include losing the war by trying to win it the wrong way.

# Chapter 5

## The Vietnam War, 1961-1968

*You can kill ten of my men for every one I kill of yours, but even at those odds, you will lose and I will win.*

*--Ho Chi Minh*

The previous chapter explored the use of airpower by the French in Algeria.  There, an established western power with superior economic and military power applied itself to the task of securing a colonial possession, eventually gaining a military victory but losing politically. This chapter will examine the use of airpower by the US in Vietnam, where a western power found similar difficulty transforming a seemingly inherent advantage into a favorable outcome.  Throughout the period spanning the entire conflict, American aircraft dropped roughly eight million tons of munitions on an area the size of Washington State.  The represents four times the total amount of ordnance delivered by aircraft in WWII and more than 17 times the aerial ordnance dropped in the Korean War.[1]  Yet, for all that effort, the US failed to achieve its objectives.  Searching for relationships between the use of airpower and this outcome is the task of this chapter.

Much like overall US involvement, the role of airpower in South Vietnam grew over time from a token advisory effort into a gargantuan warfighting effort.  President John F. Kennedy, having concluded that the USSR would spread communist ideology through "people's wars" rather than open conflict, introduced advisors into the Republic of Vietnam (RVN) in response to political instability there coupled with the threat of communist predation by the Democratic Republic of Vietnam (DRV) in

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[1] Michael Kelley, "Slow Squeeze," editorial comment, *The Atlantic,* May 2002, http://www.theatlantic.com/doc/print/200205/kelly?x=48&y=4.

the north.  By early 1961, US airmen were operating in South Vietnam as trainers and direct participants, conducting special operations and providing air mobility.  As the intensity of operations increased over time, American airmen found themselves taking a more active role.[2]

After a brief period of low-intensity involvement, US airmen became central to the conduct of the war.  A friendly-fire incident at the village of Da Ket in 1962 prompted the senior US air advisor, General Rollen Anthis, to ask for and receive centralized control over all air operations from RVN President Ngo Dinh Diem.  A particularly devastating VC ambush of a convoy near Ben Cat that same year compelled Diem to order that all priority convoys receive air cover.  Together, these factors set the conditions for US airmen to seize the lead role in air operations, clearly dissolving any remaining illusion of an advisory role and pitting US forces directly against the VC.[3]  The year 1963 saw a dramatic escalation in air operations.  Sortie counts for principal fixed wing aircraft jumped 162%, and helicopter sorties multiplied by nearly a factor of five.[4]  This mission growth created a demand for airmen and aircraft that compelled General Curtis LeMay, US Air Force (USAF) Chief of Staff, to eliminate the requirement for specialized training prior to assignment in Vietnam.  This decision opened the way for large-scale deployments that led to an increasing Americanization of the conflict.[5]  November 1963 proved the most fateful of months.  In addition to the assassination of President Kennedy and the successful coup in South Vietnam that resulted in the death of President Diem, a string of successful VC attacks raised the cost of US involvement and indicated a growing VC awareness of American airpower.  An attack on the Bien Hoa airbase destroyed 13 B-57s and six

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[2] James S. Corum and Wray R. Johnson, *Airpower in Small Wars: Fighting Insurgents and Terrorists* (Lawrence, KS: The University Press of Kansas, 2006), 254-255.
[3] Ibid., 257-261.
[4] Jacob Van Staaveren, *USAF Plans and Policies in South Vietnam, 1961-1963* (Washington, DC: US Air Force Historical Division Liaison Office, June 1965), 37-38.
[5] Corum and Johnson, *Airpower in Small Wars,* 262.

VNAF A-1s.  More attacks on US strongholds followed, and President Johnson ordered a series of retaliatory airstrikes throughout the region. Committed to standing against communist aggression, Johnson soon reaffirmed the US objective of preventing a communist takeover, and instituted a program of bolder action that would increase US involvement.[6]  1964 brought greater VC infiltration of RVN society and the attacks on the USS Maddox and USS Turner Joy that produced the Tonkin Gulf Resolution.  These events resulted in a dramatic escalation of US force levels, and clearly made the war for a non-communist South Vietnam *America's war.*

Wholesale introduction of regular US forces fundamentally altered the war's conduct.  Analysis by James Corum and Wray Johnson insightfully expresses the massive shift in airpower conduct between 1961 and 1965:

> The influx of American airmen dramatically altered the role of airpower in South Vietnam. Whereas earlier in the conflict the South Vietnamese air force understood its role to be in support of the South Vietnamese army, US Air Force advisors evangelized the South Vietnamese airmen, promoting an American-style air war, one largely freed of surface tethers.  Air strikes could be mounted to destroy Viet Cong strongholds and interdict communist supply lines—an independent effort in the best keeping of the American airpower tradition.  Yet, at the same time, American airmen became convinced that the South Vietnamese were incapable of conducting the air war in a conclusive fashion.  Consequently, the US Air Force advisory mission expanded far beyond its original mandate to the point that the air war in South Vietnam became an American air war as early as 1964 and certainly by 1965.[7]

The next few years brought a larger and increasingly kinetic application of airpower.  Measures of effectiveness were increasingly tied to assessments of the numbers of sorties flown and munitions expended. Dead insurgents became the primary metric, and airpower became less concerned with countering the VC insurgency than with contributing to the attrition strategy adopted by senior US commanders.  The Tet

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[6] Ibid., 265.
[7] Ibid., 272.

Offensive mounted by VC and North Vietnamese Army (NVA) forces in early 1968, while materially disastrous for insurgents, severely damaged US domestic political support. While scholars have long debated the strategic significant of Tet, this study endorses the notion that US efforts after early 1968 were concerned primarily with finding a graceful exit from the conflict rather than achieving any sort of affirmative victory. Accordingly, this chapter will examine the application of airpower against the VC insurgency in the South, and will concentrate on the period from US introduction of advisors to the Tet Offensive.

This study will not seek to explain why the US lost the war in Vietnam. The war's result and strategic significance are sources of continuing debate. Some feel the war was never winnable, having been undertaken on a dishonest and fallacious predicate.[8] Others argue that the failure to strike directly and decisively at North Vietnam early in the conflict unnecessarily lengthened the war.[9] This study will not directly contend with any of these positions, and will not conduct a thorough analysis of the war's overall conduct. What is sought is merely a modest illustration of the general relationship between the exercise of airpower against the enemy organization and the war's strategic outcomes. Achieving this aim requires the adoption of two premises: first, that the insurgency in South Vietnam was important to the overall result of the war. And second, that airpower was important to the conduct of counterinsurgency in the south.

Airpower played a substantive role in the Vietnam War, but understanding the degree to which it provided the US with any type of advantage over the VC requires a deeper examination. The following

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[8] H.R. McMaster, *Dereliction of Duty: Lyndon Johnson, Robert McNamara, the Joint Chiefs, and the Lies That Led to Vietnam* (New York: Harper Collins, 1997), 333-334.
[9] General Curtis E. LeMay, interviewed by Mary-Ann Bendel, *USA Today,* 23 July 1986, 9A. When asked if the United States could have won in Vietnam, LeMay answered "in any two-week period you want to mention," and elaborated with a vignette implying that an additional period of bombing during Linebacker II could have secured total victory had President Nixon allowed it to continue.

discussion focuses on how airpower was applied against the VC, with the goal of exploring and uncovering larger lessons concerning the role and relevance of airpower in COIN.

**Airpower and the Five Rings of the Enemy**

*Fifth Ring: Fielded Forces.* Substantial US airpower resources were devoted to the destruction of enemy fielded forces in Vietnam. What began as Operation Farm Gate, a low-profile special operation to advise the VNAF, became over time a high profile, US-led operation to fight the VC using heavy conventional firepower.[10] At least one analyst has commented that there was in fact no "shift" in the US airpower mission in Vietnam, and that commandos believed they were being sent to Vietnam under orders from General Curtis E. LeMay "first to fight and then to train their South Vietnamese students."[11] In any case, airmen brought with them to Vietnam certain predilections concerning the role of airpower, most notably the notion that aerial firepower, including nuclear weaponry, was a valid means of conducting any kind of war, to include counterinsurgency.[12] In an interview in 1958, LeMay had noted "[a]ctually, I think it's more immoral to use less force than necessary, than it is to use more. If you use less force, you kill off more of humanity in the long run because you are merely protracting the struggle."[13]

LeMay's sentiment, popularly known as the "airman's perspective," characterized USAF culture prior to Vietnam and influenced how air operations were conducted against VC fighters. This was noticeable in official assessment of the battle of Da Ket, which was considered a success because it killed an estimated 400 enemy fighters, despite

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[10] Corum and Johnson, *Airpower in Small Wars,* 272.
[11] Earl H. Tilford, Jr., *Setup: What the Air Force Did in Vietnam and Why* (Maxwell AFB, AL: Air University Press, 1991), 66.
[12] Corum and Johnson, *Airpower in Small Wars,* 227.
[13] Fred Charles Ikle, *The Social Impact of Bomb-Destruction* (Norman, OK: University of Oklahoma Press, 1958), 75. See also Michael S. Sherry, *The Rise of American Airpower: The Creation of Armageddon* (New Haven, CT: Yale University Press, 1987), 288.

having claimed the lives of an indeterminate number of non-combatants.[14]  As US ground presence increased and US airmen became less affiliated with their VNAF counterparts, early special operations functions were overtaken by a demand for the aerial firepower airmen stood ready to provide.  By 1966, the air commandos sent to Vietnam to train the VNAF were almost exclusively performing Close Air Support (CAS) missions in support of US Army forces.[15]  Large-scale ground movements and a strategy of attrition generated large demands for airpower supporting Search and Destroy (S/D) operations, and the need for air mobility and aerial reconnaissance grew rapidly as US forces struggled to stay on pace with insurgents.  Soon, the effectiveness of airpower in Vietnam became a matter of the fraction of enemy troops killed during contact, the frequency of ordnance delivery, the intensity of enemy fire, and the number of enemy casualties per sortie.[16]  The ability to hold the enemy at risk, rather than the vitality of RVN society or its ability to withstand political instability, became the prime consideration governing the application of airpower.[17]

Air mobility was a principal means by which US airpower supported the fight against fielded forces.  Operation Mule Train, a modest mobility effort undertaken early in the course of US presence, actually produced a noticeable decline in VC activity.[18]  However, VC adaptation and an increased US force presentation created an increasing demand over time for the force projection provided by air mobility

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[14] Corum and Johnson, *Airpower in Small Wars,* 257.
[15] David J. Dean, *The Air Force Role in Low-Intensity Conflict* (Maxwell AFB, AL: Air University Press, 1986), 98.
[16] Mr. William Green, et al., *Tactical Air Support in South Vietnam Oct-Nov 1966: AFGOA Report 67-7* (Washington, DC: Headquarters USAF Operations Analysis, December 1967), 1.
[17] Wesley R.C. Melyan and Lee Bonetti, *The War in Vietnam 1966: Project CHECO Report* (Honolulu, HI: Headquarters Pacific Air Forces, 23 October 1967), 165.
[18] Ray L. Bowers, *Tactical Airlift: The United States Air Force in Southeast Asia* (Washington, DC: Office of Air Force History, 1999), 114.

resources. Comments from an Air Liaison Officer (ALO) in a 1964 report illustrate a growing need for aerial movement and resupply:

> ...The ground situation in II Corps deteriorated drastically in the last twelve months. In September, 1964, one could travel by convoy throughout the Corps. Ambushes were few, and generally for harassment purposes only. At present, every major city is isolated by road cuts from its neighbor and to the sea. Major road clear-and-repair operations by from four to six battalions were required to open a specific stretch of highway, and then only for a few days, as the troops were required elsewhere and the VC gained control of the area once again. The last train to reach Qui Nhon from Saigon arrived in late October, 1964. The trip took 26 days because of blown bridges, rail cuts, and ambushes. None has made the trip since. All resupply of II Corps was by sea and air...[19]

Correspondence between a ground commander and his air counterpart illustrates the vital role of air mobility by late 1965:

> The III Corps Commander, without the truly outstanding tactical airlift provided by the 315th Air Division, would not have been able to hold his own during this critical period. Examples of this airlift include the assembly of six battalions at Hau Bon in early July using a very poor forward airstrip in marginal weather in a 36-hour period; the rapid deployment of a Vietnamese Marine reaction force to Tan Canh in order to retake Dak To District Headquarters in mid-July and subsequently, the assembly of some 14 battalions in order to open Highway 19.[20]

The preceding quotes demonstrate two things: an increasing reliance on airpower for the rapid force projection necessary to compete with insurgents, and an increasingly reciprocal fight to control territory and maintain freedom of movement. This trend continued in 1966. As US force levels grew by nearly 100,000 between January and July 1966, in-country airlift tonnage saw a 27% increase, while the numbers of combatants transported by air within South Vietnam climbed by 37%.[21] Unlike the early stages of the conflict, more mobility operations during the war's middle period did not produce a noticeable decrease in enemy

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[19] E.E. Peterson and D.A. Whitaker, *Assault Airlift Operations: Project CHECO Report* (Honolulu, HI: Headquarters, Pacific Air Forces, Directorate of Tactical Evaluation, 23 February 1967), 2.
[20] Ibid., 63-65.
[21] Ibid., 88.

activity. It was simply required in order to contend with the burgeoning logistical and maneuver demands of a huge army operating in difficult terrain and facing constant enemy disruption.[22]

By 1968, the airlift effort in Vietnam was more than twice as intense as peak efforts during the September 1944 Allied Offensive in WWII, and four times as intense as peak deliveries in Korea in November 1950.[23] It would seem that rural development and regime support initiatives could have been tremendously bolstered by just a fraction of the resources devoted to the hunting and killing of insurgents, but the drive to "kill bad guys" consistently animated air mobility efforts. Of course, these efforts were not always fruitful. All too often, ground forces arrived at an objective area too late to fight decisively against fleeting insurgents. Vertical envelopment via helicopter often failed against a VC enemy with unrivaled terrain familiarity and elusiveness.[24] Mobility was thus effective yet indecisive, and was only one role fulfilled by airpower in the Vietnam counterinsurgency. Reinforcement of troops in contact was also a prominent role.

The use of airpower for close support of troops in contact was a central theme of the Vietnam War, and consumed a considerable weight of airpower effort. As ground forces became increasingly engaged in large operations, the demand for CAS skyrocketed. In 1966, the Air Force deployed additional CAS-dedicated squadrons of F-100s to South Vietnam. One such squadron flew more than 13,000 CAS sorties in its first six months.[25] Of the 14,848 USAF attack sorties flown between October and November 1966, more than 81% were controlled by an airborne or ground-based Forward Air Controller (FAC).[26] The

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[22] Bowers, *Tactical Airlift,* 246.

[23] Ibid*.,* 691.

[24] Max Boot, *The Savage Wars of Peace: Small Wars and the Rise of American Power* (New York: Basic Books, 2002), 298-299.

[25] Robert F. Dorr, *Air War South Vietnam* (London: Arms and Armour Press, 1990), 66-67.

[26] Green, et al., *Tactical Air Support in South Vietnam,* 4.

increasingly prominent role of FACs over the course of the war demonstrates an energetic effort to re-shape air-ground organization and coordination.  In 1967, Bien Hoa airbase was said to be the busiest airfield in the world, with an F-100 taking off or landing every 42 seconds to perform the CAS role.[27]

The wholesale employment of CAS in South Vietnam led to a number of warfighting tendencies that help explain US COIN performance.  Mismatches between aircraft ordnance and the needs of ground forces were sometimes an issue.  One Army officer declared that giving ground force commanders a more direct role in ordnance specification would result in greater effectiveness against insurgents, implying less than optimal air-ground coordination.[28]  Other evidence suggests that airmen consistently acquiesced to ground force demands for "wall-to-wall napalm" over other forms of CAS ordnance because of its large effective radius and intimidation effect.[29]  While undoubtedly destructive, napalm was too indiscriminate a weapon for large-scale employment in a conflict requiring "the utmost discrimination in killing."[30]  Over time, it became less likely that airmen would be concerned with discriminate effects, as effectiveness came to be associated with numbers of enemy deaths.  An internal Air Force study from 1967 graded CAS efforts in South Vietnam favorably based on the achievement of an average of three enemy casualties per sortie.[31]  Metrics such as this raise questions concerning the basic logic governing CAS operations.  While countless enemy were undoubtedly dispatched in this operational construct, there can be little doubt that destruction wrought

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[27] Dorr, *Air War South Vietnam,* 75.
[28] Lieutenant Colonel Robert W. Brownlee, interview, US Air Force, *Tactical Air Support Effectiveness, 1966.*
[29] Lieutenant Colonel Thomas L. Crawford, interviewed by Ernie S. Montagliani, *The Siege of Ben Het Supporting Documents and Background Material: Project CHECO Report* (Honolulu, HI: Headquarters, Pacific Air Forces, 28 October 1969).
[30] Attributed to Lieutenant Colonel John Paul Vann, as presented in Boot, *The Savage Wars of Peace,* 289.
[31] Green, et al., *Tactical Air Support in South Vietnam,* 7-8.

on a society struggling to stand on its own was an unfavorable impact. Still, bright anecdotes demonstrating the tactical import of CAS to soldiers on the ground are difficult to set aside.

The siege of Khe Sanh in early 1968 showcased the game-changing nature of aerial firepower in support of ground troops. More than 3,000 airstrikes defended the base during the first week of the battle, and more than 23,000 tactical strike sorties were flown over its 77 days, including B-52 heavy bombardment missions. Over 96,000 tons of aerially delivered ordnance helped preserve the base, leading one senior Army commander to call Khe Sanh "probably the first major ground action won almost entirely by airpower."[32] Captured documents reinforced this view. One enemy soldier wrote in his personal notes that B-52 strikes had been the main cause of a mass desertion in his regiment. Another who had fought at Dien Ben Phu called the fighting at Khe Sanh much fiercer, writing that "[i]f someone came to visit this place, he might say that this was a storm of bombs and ammunition which eradicated all living creatures and vegetation."[33] Given such testimonials, the psychological impact of CAS on both friendly and enemy forces seems tough to deny. Yet, nearly 100,000 tons of ammunition could not drive insurgents off nearby hills. The enemy had absorbed tremendous punishment from the air and suffered a tactical defeat without greater adverse operational or strategic consequences.[34] US forces soon abandoned Khe Sanh, declaring that the enemy "had changed his tactics and reduced his force" and that "a fixed base (in that location) was no longer necessary."[35] Popular perception was that the enemy had demonstrated that he couldn't be driven off with asymmetric firepower, and that continuing

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[32] K. Sams, J. Schlight, R.F. Kott, M.J. Mendelsohn, and P.D. Caine, *The Air War in Vietnam 1968-1969: Project CHECO Report* (Honolulu, HI: Headquarters, Pacific Air Force, Directorate of Tactical Evaluation, undated), 29.
[33] Ibid., 29-30.
[34] Boot, *The Savage Wars of Peace,* 302-303.
[35] Clark Dougan, Stephan Weiss, et al., *Nineteen Sixty Eight* (Boston, MA: Boston Publishing Company, 1983), 42.

defense of the base would prove too costly. While CAS and mobility were key airpower roles in South Vietnam, great effort was also expended trying to discern the tactical state of the enemy.

Escalating US troop and maneuver levels created a voracious appetite for tactical air reconnaissance missions. USAF tactical reconnaissance missions totaled 23,365 in the first half of 1967, a 46% increase over the previous six-month period.[36] This tempo exposed limits on what could be achieved using high-speed reconnaissance aircraft in the unique terrain of Vietnam. An internal USAF study from 1966 discusses accuracy problems in identifying small troop units and vehicles. The same study suggests a coordination cycle more rapid by a factor of five in order to keep pace with transient enemy units. Such a rapid system of coordinated responsiveness proved elusive. Airmen could not keep pace with the demand for photographs and reports of enemy positions that grew naturally from the boom in ground operations.[37] The demand for aerial reconnaissance was also a function of the US grapple to conduct the human sorting necessary to separate insurgents from non-combatants.

**Fourth Ring: Population.** While there is no evidence that airpower operations against fielded forces sought to deliberately target the population, the character of airpower in South Vietnam created an inescapable premise that civilians would be harmed. Air planners regarded this is an incidental consideration rather than a fundamental variable in operational design. As early as 1963, the Seventh Air Force commander cautioned against exaggerated reactions to the deaths of civilians, as such reactions might limit the usefulness of airpower.[38]

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[36] Lieutenant Edward P. Brynn, *Reconnaissance in SEASIA Jul 1968-Jun 1969: Project CHECO Report* (Honolulu, HI: Headquarters, Pacific Air Forces, Directorate of Tactical Evaluation, 15 July 1969), 35.
[37] Captain Mark E. Smith, *USAF Reconnaissance in Southeast Asia 1961-1966: Project CHECO Report* (Honolulu, HI: Headquarters, Pacific Air Forces, Directorate of Tactical Evaluation, 25 October 1966), 62-65.
[38] Corum and Johnson, *Airpower in Small Wars,* 257.

This caution was offered in the wake of an attack considered successful for having killed 400 VC insurgents at the cost of several civilian lives, and contributed to a climate of disregard for civilian deaths that would come to characterize airpower operations in South Vietnam. Despite demonstrating this type of operational myopia, airmen nonetheless seemed to understand that success in Vietnam would hinge to some degree on being able to isolate the insurgency.

*Third Ring: Infrastructure.* Operational tendencies carried into the Vietnam War characterized the battle to isolate the VC from its external sanctuary to the north. The strategic bombing campaigns conducted by US airmen during WWII sought to undermine enemy ability to wage war by striking at the sources of his vitality rather than contending with his forces in a protracted land war. This way of thinking about the unique value of airpower was epitomized by General LeMay, who had been the architect of the WWII campaign over Japan and later led the US Air Force into Vietnam.[39] The preoccupation with bombardment of industrial states led to a view among airmen that interdiction had mostly to do with the disruption of large, mechanized supply systems as opposed to the low-profile methods used by insurgents. This tendency, reflected in official Seventh Air Force plans that drove the war's initial stages, would place airpower efforts at increasing odds with the realities of the organizational subsystem they were attempting to interdict.[40] But at the outset of US involvement, alternatives to industrial bombardment were attempted.

Airpower in South Vietnam attempted to disrupt enemy infrastructure in two principle ways. First, airmen attempted to undermine enemy freedom of movement and logistical sustainment within South Vietnam through a defoliation campaign. Operation Ranch

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[39] Sherry, *The Rise of American Airpower,* 288-289.
[40] C. William Thorndale, *Interdiction in SEASIA November 1966-October 1968: Project CHECO Report* (Honolulu, HI: Headquarters Pacific Air Forces, Directorate of Tactical Evaluation, 30 June 1969), xvi.

Hand, undertaken in 1961, targeted strips of land spanning 200 yards adjacent to main roadways and other border areas where VC guerrillas were believed to be infiltrating personnel and supplies. Select cultivation areas were also targeted in an attempt to reduce local food supplies available to insurgents and to increase air-to-ground visibility in order to restrict insurgent freedom of movement. After nearly thirty months of spraying operations, US leaders could claim 60-70% in visibility in key areas, the surrender of 112 insurgents frightened by chemical spraying, and the destruction of 756,000 pounds of food on 104 acres of cultivated land.[41] According to US military generals, this was achieved "without any adverse effects on friendly Vietnamese."[42] Unsurprisingly, VC spokespersons claimed considerable damage to civilian property and a number of ill effects to civilian health.[43] This undermined US/RVN legitimacy by incidentally harming the population. Thus, while defoliation seemed to grasp the realities of insurgent infrastructure, it was nonetheless an unsustainable tactic in moral and perceptual terms. State Department objections concerning the use of defoliant would bring an effective end to the program in 1963, although some level of spraying continued until at least 1967.[44]

The second principle use of airpower against enemy infrastructure was the continual attempt to disrupt enemy supply and communications along the Ho Chi Minh Trail, an effort that had some success but failed to substantively undermine the VC. While internal USAF reporting credits border vigilance with preventing "sizable supplies" from entering South Vietnam, it also acknowledges the limits of aerial interdiction.[45] VC sustainment demands were so modest that the achievement of a 25-30% truck attrition rate was insufficient to appreciably reduce the level

[41] Corum and Johnson, *Airpower in Small Wars,* 257.
[42] Van Staaveren, *USAF Plans and Policies,* 60-61.
[43] Corum and Johnson, *Airpower in Small Wars,* 256.
[44] Ibid., 257.
[45] Thorndale, *Interdiction in SEASIA,* 6.

of violence in South Vietnam.  Even a concentrated effort in 1967 that increased truck kills by a factor of five was insufficient to prevent the infiltration and stockpiling that enabled the 1968 Tet Offensive.[46] Institutionally, the Air Force remained somewhat aloof to the demands of insurgent interdiction, assessing that "[d]isrupting such clandestine supply channels obviously required ground troops to closely supervise arable lands and local populations; it was not an Air Force responsibility."[47]  This unconcern seems to place interdiction at the periphery of airpower considerations during Vietnam.

A 1967 USAF interdiction assessment concluded that enemy manpower would continue to overcome efforts to disrupt infrastructure. Supply needs were simply too modest and VC operatives too familiar with terrain for truck-plinking to be decisive.  Interrogations of captured insurgents reflected that 95% of those making it into South Vietnam simply walked around border defenses and avoided suspected target areas.  Interrogations rarely reflected ammunition shortages, in part because of modest logistical demands.[48]  The nature of insurgency dictates that rebels with freedom of movement, terrain familiarity, and local support are able to choose the time and place of battle or avoid it when conditions are not favorable.  Disruptions to VC supply and communications lines were overcome by simply bypassing opportunities for battle until supplies could catch up.  While explainable by any number of difficulties, the failure of US forces, and their airpower component, to solve the infrastructure problem was strategically significant.  Insurgents were able to gradually build the presence and

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[46] A point made in Ibid., 119-121.  On the limitations of Seventh Air Force analysis and statistics, see Bernard C. Nalty, *The War Against the Trucks: Aerial Interdiction in Southern Laos, 1968-1972* (Washington, DC: Air Force History and Museums Program, 2005), 110-112.

[47] Ibid., 18.

[48] Ibid., 5-10.  The logistical requirements of the VC are captured admirably in Le Cao Dai's memoir entitled *The Central Highlands: A North Vietnamese Journal of Life on the Ho Chi Minh Trail, 1965-1973,* translated and annotated by Lady Borden (Hanoi: The Gioi, 2004)

sustainment stockpiles necessary to undertake culminating campaigns that, juxtaposed against the falsely buoyant themes that had been delivered to the American public prior to their execution, severely undermined domestic political support for a continuation of the war. Political analyst Stewart Alsop, paraphrasing a Johnson Administration insider, reported that "…one thing we've learned—you can't interdict infiltration or supplies, for this kind of war, with bombs."[49]

**Second Ring: Organic Essentials.** Early efforts to forestall a communist takeover in Vietnam featured operations designed to drain the organic essentials of the VC, but these efforts were modest and short-lived. Air commandos deployed under operation Farm Gate conducted leaflet and loudspeaker operations using US airpower and with the cooperation of VNAF officers. These operations targeted the cause and message of the rebellion and sought to undermine VC legitimacy. Other missions reinforcing South Vietnamese Civilian Irregular Defense Groups (CIDGs) sought to manufacture and maintain the support of indigenous people, enabling them to fight for their own political stability.[50] From the beginning, however, such missions faced difficult obstacles. Perhaps as a function of climate created by LeMay, Farm Gate airmen were reticent to trust and develop their VNAF counterparts, scarcely allowing them near aircraft controls. In time, US airmen undermined the intent of the entire mission by replacing VNAF airmen with token RVN non-airmen who could create the impression of involvement without substantive cooperation between the USAF and VNAF.[51] Green Beret CIDG efforts early in the war held the promise of focusing effort on the standing government at the expense of insurgent legitimacy, but were abandoned as the war became larger and took on a more conventional character. Similarly doomed was the Marine Corps Combined Action Platoon (CAP)

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[49] Stewart Alsop, "The Lessons of Vietnam," in *Newsweek,* Asian Edition, 17 February 1969, 40.
[50] Dean, *The Air Force Role in Low-Intensity Conflict,* 99.
[51] Ibid., 100-101 and Dorr, *Air War South Vietnam,* 23.

program, which sought to pacify South Vietnam by stationing defensive constabulary forces in hamlets to build relationships with the population, bring legitimacy to the sponsored government, and build an image of commitment. The CAP program, by maintaining a constant presence among the population, carried the potential to build COIN legitimacy at the interpersonal level. Modeled after successful Marine initiatives in Nicaragua, Haiti, and the Dominican Republic, this effort would have required and benefitted from the robust mobility airpower resident in the US arsenal. But despite low casualties, high success rates, and the admiration of counterinsurgency experts, the program was never instituted on a large enough scale to arrest the inexorable drift toward large-scale, offensive operations.[52]

Airpower efforts in the second ring were well intentioned but incomplete, and never played a prominent enough role in US strategy to seriously threaten the VC. Large-scale psychological operations, civil defense actions, crop spraying, civil aviation development, and aerial policing actions were all either ignored completely or abandoned in the early going.[53] Capacity building was attempted only half-heartedly. Humanitarian efforts and rural development could have benefitted from even a small fraction of air mobility efforts, but there is no evidence that was suggested. One Army officer with considerable field experience suggested the use of armed aerial presence patrols to reassure nervous populations, dampen enemy freedom of movement, and shorten response times in the event of insurgent contact.[54] This suggestion gained scant notice. Also going largely unregistered was the sentiment captured in a 1967 RAND study formulated on the basis of three months of field investigation, which led its authors to assess that significant disaffection within the population was being created through the chosen airpower

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[52] Boot, *The Savage Wars of Peace,* 304-308.
[53] Dean, *The Air Force Role in Low-Intensity Conflict,* 99.
[54] Major Berlin B. Huffman, interview, US Air Force, *Tactical Air Support Effectiveness, 1966.*

approach, and that a program of pacification could more effectively reduce violence in Vietnam. That same study attributed airpower difficulties in Vietnam with a lack of problem comprehension among Air Force leaders, especially those with direct command of war organization and conduct.[55] This indictment did little to shape operations targeting the enemy's cause and message.

**First Ring: Leadership.** Airpower operations against insurgent leadership in South Vietnam do not warrant in-depth analysis. Little evidence exists to suggest that operations specifically targeting insurgent leaders made use of airpower.

## Airpower and the Enemy Organizational System

The role and relevance of US airpower in the Vietnam War is best understood as a function of how it interacted with the enemy organization at the system level. Exploring the degree to which US air operations reflected an understanding of insurgent organization is a useful means of tying US airpower to the overall outcome of the COIN campaign in South Vietnam.

US airpower efforts in South Vietnam were overwhelmingly concerned with killing VC insurgents, and this demonstrates a lack of understanding of the role of fielded forces in the insurgent organizational system. In 1966 alone, B-52s delivered 135 million pounds of bombs into South Vietnam in pre-planned strikes aimed at suspected enemy outposts.[56] Airmen themselves concluded that numbers of sorties and tons of munitions had become the prime metrics for COIN progress.[57] One officer with experience in the FAC mission spoke at length about the

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[55] J.W. Ellis and M.B. Shaffer, *Three Months in Vietnam—A Trip Report: The Paramilitary War* (Santa Monica, CA: RAND, 16 August 1967), 18-23.
[56] US Air Force. *Effectiveness of Close and Direct Air Support in South Vietnam, Second Progress Report: Project CORONA HARVEST* (Washington, DC: Headquarters US Air Force, Operations Analysis, June 1966), 2.
[57] Lieutenant Colonel Jack G. Cude, interviewed by Ernie S. Montagliani, *The Siege of Ben Het Supporting Documents.*

difficulty in aerially identifying VC targets, yet readily endorsed operating in this manner for lack of a better alternative.[58]  His attitude crystallizes the main theme of the US airpower effort: killing "bad guys" was the overwhelming preoccupation of US airpower, and scarce evidence exists to demonstrate official consideration as to whether such measures were creating progress toward strategic goals.  By war's end, airmen had ravaged South Vietnam in a fruitless effort to proxy widespread destruction for a true estimation of and discriminate response to enemy activity.[59]  This stands in tension with the fact that fielded forces represent only a modest fraction of the overall functioning of an insurgency, which draws heavily on non-physical requirements and is animated by political change rather than military prowess.

By contrast, US airpower operations were comparatively unconcerned with VC leadership targets.  This could be explained as a lack of intelligence concerning the makeup of the VC, but is more likely a reflection of US understanding that the VC organization would not be effectively disrupted through the removal of one or a few key leaders.  Airmen had a less certain grasp on the role of the population in an insurgent organizational system.

US aerial operations against population targets in South Vietnam demonstrate a fundamental gap between strategic objectives and operational design. In seeking to directly impact enemy fielded forces and infrastructure, airmen often struck indiscriminately at the population whose allegiance was the stated object of the enterprise.  Between April and December 1966, more than 3,400 B-52 missions dropped more than 67,680 tons of munitions against VC targets in South Vietnam.[60]  The

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[58] Captain Jerry Rhein (USAF pilot assigned to South Vietnam), interviewed by Major Thomas J. Hickman, Tan Son Nhut AB, South Vietnam, 3 January 1963.
[59] Mark Clodfelter, *The Limits of Airpower: The American Bombing of North Vietnam* (Lincoln, NE: University of Nebraska Press, 2006), 129.
[60] US Air Force, *The Expanding Role of B-52 Operations in SEA 1966: AFGOA Project Analysis Plan GWD 66-4, Draft Supporting Documents* (Washington, DC: Headquarters USAF Operations Analysis, date unknown).

delivery of such massive amounts of ordnance into an agrarian landscape could not help but alienate increasing numbers of citizens. While airmen practicing airpower at the tactical level often wondered whether this approach was sacrificing long-term objectives in a drive for short-term body counts, the strategy remained flawed in its involvement of the population.[61]  Insurgencies require population support for basic functioning, and airpower attacks victimizing civilians tended to drive more South Vietnamese to the VC cause, demonstrating a failure to carefully consider the use of airpower in a different kind of war.

By incidental acts and an openly acknowledged willingness to trade civilian deaths for insurgent body counts, US airpower did much to undermine population support. While the number of South Vietnamese civilians killed by US airpower is a subject of debate, a conservative estimate places the total at about 415,000.[62]  Imposing this level of damage upon the population whose allegiance was the very object of the conflict, together with the absence of a coherent program to assure and partner with South Vietnamese citizens, undermined the image and appeal of the US effort. As skillfully intimated by Max Boot, "[i]f you're trying to win the hearts and minds of the peasants, you don't want to napalm their huts.  Yet that is what was happening."[63]

The level of physicality evident in US airpower operations was drastically inconsistent with the largely non-physical nature of insurgent requirements. Between 1965 and 1968, approximately 595,000 sorties were flown in South Vietnam by US attack aircraft fulfilling kinetic roles in CAS and pre-planned strike roles.[64]  1967 saw a 69% increase in combat sorties from 1966 levels, with B-52s delivering 87% more munitions than in the previous year.  The predilection for "wall-to-wall

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[61] Dorr, *Air War South Vietnam,* 30.
[62] Kelley, "Slow Squeeze," *The Atlantic.*
[63] Boot, *The Savage Wars of Peace,* 307-308.
[64] US Air Force. *National Strategy and the Employment of Airpower in SEASIA, Phase IV 1 Apr 68-20 Jan 69: Project CORONA HARVEST* (Washington, DC: Headquarters US Air Force, Directorate of Plans, undated), 121.

napalm" in CAS missions points to a drive for overwhelming force in a type of conflict requiring "the utmost discrimination in killing."[65]  Over the course of the war, airmen increasingly correlated perceived success with numbers of enemy deaths. CAS efforts were graded almost solely on the number of enemy casualties achieved for each sortie flown.[66]  In the wake of the 1968 Tet offensive, US forces struggled to recapture towns and rural areas toppled by the VC.  This led, in some cases, to an indiscriminate use of airpower.  One such incident killed an estimated 500 civilians at the village of Ben Tre, where an anonymous Air Force major uttered the now-infamous words: "In order to save the village, it became necessary to destroy it."[67]  Airmen sought to win physically against a non-physical phenomenon, but kinetic airpower did more harm than good to COIN efforts in South Vietnam.  Little evidence exists that US air strategists gave careful consideration to the non-physical nature of insurgency, which might have guided a less physical approach.

The role of US airpower in South Vietnam can be understood as a series of VC organizational behaviors emerging from the interplay of US airpower and targeted insurgent subsystems.  When the US targeted fielded forces, operations also tended to severely impact the population, implying a negative link between the fifth and fourth rings.  Civilian deaths fed the VC cause, enhanced the recruitment of adherents, and fed the communist propaganda machine with considerable ammunition with which to convey a message of US brutality.  Air operations against population targets sometimes killed insurgents, but more brought more weapons, supplies, and popular support to the VC cause.  This implies that the link between the fifth and fourth rings in the VC system

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[65] Attributed to Lieutenant Colonel John Paul Vann, as presented in Boot, *The Savage Wars of Peace,* 289.

[66] Green, et al., *Tactical Air Support in South Vietnam,* 7-8.

[67] Bernard C. Nalty, *Air War Over South Vietnam 1968-1975* (Washington, DC: Air Force History and Museums Program, 2000), 22.

continued as a link from the fourth to the second ring, and that this latter link was extremely sensitive to indiscriminate airpower effects.

The behavior of the VC organizational system when subjected to US airpower followed two discernible patterns that help explain the outcome of the Vietnam War. First, kinetic airpower targeting VC fielded forces impacted the South Vietnamese population, which became increasingly disaffected and disinterested in the prospect of supporting US goals. During 1966, more than 70,300 attack sorties were flown in efforts against insurgents in South Vietnam, roughly one-third of the entire sortie total of 225,000 for all of Southeast Asia. Yet, by the close of 1967, the enemy held more territory than at any previous time, and was increasingly aggregating small bands of insurgents into more organized groups.[68] The pattern is unmistakable: the insurgency grew as more kinetic force was applied to it. Second, kinetic airpower operations against population targets inflated the organic essentials available to the VC, greatly enhancing the cause, message, and legitimacy of the insurgency. This happened at the cost of the image and legitimacy of US operations, resulting in not only a failure to earn to allegiance of the South Vietnamese, but a loss of domestic political support for continuation of the war. As asserted by Lieutenant Colonel John Paul Vann in 1963, "every time we killed an innocent person, we lost ground in our battle to win the people."[69] The substitution of firepower for human sorting led to civilian carnage that turned the logic of counterinsurgency on its head and turned the American polity against the war. A study of US television coverage between 1965 and 1973 concluded that US forces and insurgents received roughly equal blame for civilian deaths in media accounts.[70] This illustrates that in the process of "killing bad guys," US airmen created significant confusion

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[68] Dorr, *Air War South Vietnam,* 81.
[69] Boot, *The Savage Wars of Peace,* 289.
[70] Daniel C. Hallin, *The Uncensored War: The Media and Vietnam* (New York: Oxford University Press, 1986), 153.

concerning the actual identity of the "good guys."  While the inability to isolate South Vietnam played a significant role in the vitality of the VC, the 1968 Tet Offensive was materially disastrous for enemy fielded forces.  Still, this proved strategically irrelevant.  The failure of COIN efforts, including airpower, to account for key relationships between and among VC organizational subsystems created an insurgency with sufficient political strength to overcome its military disadvantage.  The result was a political defeat for the US despite an indecisive military campaign in the south.

**Conclusion**

The legacy of US airpower in South Vietnam is one of earnest intentions and strategic failure.  US airpower operations were carried out within a fundamentally flawed warfighting approach that brought large force operations and indiscriminate firepower to bear in a context that called for something much different.  Early motivations to win the hearts and minds of the South Vietnamese people were continually shoved aside in favor of contending directly with enemy fighters.  An air strategy that could have benefitted greatly from a greater emphasis on leaflet drops, humanitarian assistance, and constant presence/policing operations instead focused almost exclusively on killing.

US airpower was ultimately a net disadvantage in South Vietnam because of the manner in which it faithfully contributed to the flawed strategy of attrition.  An excessive focus on fielded forces and an inappropriate level of physicality colored air operations, in defiance of the nature and characteristics of the enemy.  US airmen failed to account for the complex behavior of an insurgency, and unwittingly made the VC morally and mentally stronger in heavy-handed attempts to make it physically weaker.  Destructive operations targeting one aspect of the insurgency often produced disproportionate and disadvantageous consequences in another area, suggesting a particular sensitivity of

insurgencies to the application of kinetic airpower.  In failing to consider the political and perceptual sensitivity of employing an asymmetric capability, the US failed to shape its airpower accordingly.  Because of the asymmetric advantage airpower grants to counterinsurgents, it can easily be perceptually shaped by insurgents a weapon of repression, and this will be noticed by those sitting in judgment of the legitimacy of each side of the conflict.  The image of a superpower indiscriminately slaughtering civilians without appreciable contestation is an image likely to alienate, rather than attract, internal and external observers.  Reports of US bombers laying waste to large swaths of agrarian landscape, leaving many dead in their wake, did much to turn US citizens against the war effort.  In this way, airpower asymmetry was actually a *disadvantage* for the US, as it led to the imposition of political and military limits that made victory unachievable.  US legitimacy continually eroded throughout the war, as every indiscriminate bomb strengthened the enemy politically.

The most valuable conclusion evident from the US airpower experience in South Vietnam is that the absence of a deliberate approach severely limited US strategic horizons.  The findings decoded through use of the EAS lens illustrate a key insight previously highlighted in the France-Algeria case: an air force approaching COIN absent a grasp of how an insurgency operates will likely be seduced by its own talents, which most often involve the exercise of heavy aerial firepower.  Despite the urging of a 1967 RAND analysis that the USAF undertake a careful review of resource employment to bring airpower more in line with the principles of COIN, no fundamental change in strategy was attempted.[71] Consequently, airpower never adapted to the systemic organizational characteristics of the VC, and US forces arrived at the doorstep of the 1968 Tet Offensive in a state of strategic exhaustion.  In failing to

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[71] Ellis and Shaffer, *Three Months in Vietnam,* 10.

comprehend the type of war it was undertaking, the US failed to shape airpower into the scalpel needed for COIN.  Airpower instead came to symbolize a brutal hatchet, and this contributed to US political and strategic defeat.  This underscores the importance of shaping the airpower weapon with a deliberate strategy. As highlighted by France earlier in the decade, the expedient application of airpower in an insurgency carries the risk of severe consequences, to include losing the war by trying to win it the wrong way.

Vietnam reveals an associated but distinct lesson for US airpower strategists: airpower obeys limits, and cannot always overcome the challenge presented by an enemy in an insurgency fight.  Sensing an advantage by its possession of superior airpower technology, the US attempted to overcome the operational ingenuity, fighting will, and superior manpower of the VC by, as General LeMay said, "bombing him into the stone age."  The expenditure of 2.2 million tons of munitions in South Vietnam, along with massive mobility, reconnaissance, and interdiction efforts, did not bring the VC to heel.  The possession of airpower is not a panacea for victory in COIN, no matter how great the technology or firepower margin between insurgent and counterinsurgent. Airmen must expect the enemy to vote and be prepared to soberly communicate the limits of what is achievable by airpower in this unique brand of conflict.

# Chapter 6

## The Soviet-Afghan War, 1979-1989

*One can occupy Afghanistan, but one cannot vanquish her.*

*--Alexander the Great*

In April 1978, communists seized control of the central government of Afghanistan in a military coup, setting in chain events that would lead to a decade-long struggle between a people in arms and a great military power. Ultimately, both would suffer tremendously at little gain. President Nur M. Taraki, having ascended to power in the April Revolution and emboldened by support from Moscow, undertook a program of land and social reforms that ran counter to long-standing tribal traditions at the heart of the Afghan way of life. Consequently, Taraki's government failed to gain popular support, and was met almost immediately by armed challenge. As this resistance intensified into a broader revolt, communist purges of the army of the Democratic Republic of Afghanistan (DRA) reduced its fighting strength, leaving the Taraki regime increasingly vulnerable. In September 1979, Taraki's chief minister, Hafizullah Amin, seized power and executed Taraki in a bloody coup. Sensing a loosening grip on a once promising client state, the Soviet Union moved to stabilize the situation with an invasion in December 1979.[1] Amin was executed and a USSR-sponsored leadership group forcibly installed. Thus began a protracted and savage war that would occupy one eighth of Soviet history, severely damaging the interests of a declining superpower.[2]

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[1] Lester W. Grau, ed., *The Bear Went Over the Mountain: Soviet Combat Tactics in Afghanistan* (Washington, DC: National Defense University Press, 1996), xvii.
[2] Artyom Borovik, *The Hidden War: A Russian Journalist's Account of the Soviet War in Afghanistan* (New York: Grove Press, 1990), 13.

Initial Soviet objectives envisioned a limited and inexpensive occupation, but such hopes were revised as operations unfolded. The USSR sought to put down the rebellion by garrisoning key lines of communications, airbases, and logistical hubs while providing air, intelligence, and logistical support to DRA forces, which were to fan out across the countryside and crush resistance. The USSR sought to achieve these aims while minimizing Soviet casualties and drawing upon technological advantage to proxy for large numbers of ground troops.[3] Soviet reticence to undertake a larger troop presence in pacifying the Afghan uprising may have been based on a number of factors, to include domestic political and economic pressures, mistaken beliefs concerning the depth of the problem, or chauvinistic assumptions concerning the fighting prowess of Afghan guerrillas. More discernible is that the USSR unduly credited the viability of communism and central governance in Afghan society, did not foresee the ferocity and pervasiveness of the rebellion that rapidly gripped the country, and overestimated the capability of the DRA military to contend with it.

As the concept of a brief stability operation was overcome by a series of reciprocal attacks, the USSR came to grips with the reality of a greater undertaking. Ordinarily segmented and mutually hostile tribal groups found commonality in the desire to eject a foreign invader and protect religious and cultural norms. While lacking clarity on a political direction for Afghanistan, the *mujahideen* nonetheless achieved a vital enough movement to redefine the terms of the occupation. As the USSR's 40th Army struggled to cope with this ascendant threat, its approach came to be broadly characterized by intimidation, reprisal, and large-scale sweep operations.[4] A planned stability operation to solidify a *coup de main* spiraled rapidly into an extended and large-scale

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[3] Grau, *The Bear Went Over the Mountain,* xviii.
[4] Bruce Amstutz, *Afghanistan: The First Five Years of Occupation* (Washington, DC: National Defense University Press, 1986), 144.

counterinsurgency.  What the USSR lacked in deliberate preparedness, it hoped to compensate for with superior firepower.  Backing the well-equipped and modern Red Army was the largest air force in the world.

Airpower played a prominent role in the Soviet approach, fulfilling a variety of roles over the course of the war and adapting over time as a reflection of changes in ground force strategy.[5]  Early efforts to limit casualties and place DRA troops at the operational forefront kept the Red Army largely in garrison, from which they emerged for periodic sweeps before returning to secure positions.  This approach relied upon a modestly sized air fleet for area bombing, close air support, and support functions.[6]  As 40th Army commanders came to realize they would not receive sufficient forces to conduct a broad pacification effort, an increasingly offensive brand of attrition warfare took hold.  This created a larger role for airpower in the delivery of ordnance, the interdiction of supplies and reserves, the attempted isolation of the battlefield, and the destruction of agricultural bases believed to be supporting insurgent elements.[7]  More importantly, as Soviet strategy brought more troops out of isolated garrisons and into offensive operations in remote areas, those troops came to depend heavily on helicopter aviation.  Having brought 60 helicopters and 100 fixed wing aircraft along for the initial invasion, the Soviets swiftly increased their airpower footprint.[8]  By the end of 1983, nearly 500 fixed wing assets and more than 600 helicopters were stationed in Afghanistan, with helicopters playing increasingly diverse airpower roles in close air support, surface attack, artillery spotting,

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[5] James S. Corum and Wray R. Johnson, *Airpower in Small Wars: Fighting Insurgents and Terrorists* (Lawrence, KS: University Press of Kansas, 2003), 390.

[6] Amstutz, *Afghanistan,* 128.

[7] Stephen J. Blank, *Operational and Strategic Lessons of the War in Afghanistan, 1979-1990* (Carlisle Barracks, PA: US Army War College Strategic Studies Institute, 1991), 73.

[8] Anthony H. Cordesman and Abraham R. Wagner, *The Lessons of Modern War Volume III: The Afghan and Falklands Conflicts* (Boulder, CO: Westview Press, 1990), 9-11.

casualty evacuation, and land force projection.[9]  By mid-war, the emblem of Soviet operations in Afghanistan was modern airpower, and its principal weapons were the Mi-24 Hind helicopter and the Su-25 Frogfoot ground attack fighter.[10]  Both performed impressively within the operational design chosen by the USSR.  But despite the application of this perceived asymmetric advantage, Soviet objectives remained elusive.

Two principal flaws plagued soviet strategy in Afghanistan.  First, Soviet political leaders wrongly believed that the DRA was capable of a much greater degree of control over Afghanistan than it could effectively exert.  Deliberations between Moscow and the Taraki government in the months prior to the invasion demonstrate a Soviet belief that the DRA was negligent in failing to control its border with Pakistan.[11]  In truth, the DRA had only a modest communist constituency in Afghanistan, estimated at less than 18,000 affirmative members.[12]  The government in Kabul had little control over rural Afghanistan, least of all along a border with international political meaning but only modest relevance to the tribes living there.  Attempted isolation of the insurgency via control of the border would bedevil the USSR throughout the war.  That the USSR believed it possible for the DRA to control the border demonstrates an unrealistic assessment of this inherently volatile and largely ungovernable society.  More critically, the USSR fundamentally misunderstood the nature of the enemy it faced.  In applying a template for subjugation that had worked in other contexts, the USSR failed to understand the cultural, religious, and social forces that would lead the segmented rural population of Afghanistan to unite around an animating

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[9] Amstutz, *Afghanistan,* 172.  Cordesman and Wagner, *The Lessons of Modern War Volume III,* 51.

[10] Olivier Roy, *The Lessons of the Soviet/Afghan War: Adelphi Paper 259* (London: Brassey's, 1991), 53.

[11] Minutes of conversation between L.I.Brezhnev and N.M. Taraki, 20 March 1979, reproduced in *Cold War International History Project Virtual Archive,* http://www.wilsoncenter.org.

[12] Mark Urban, *War in Afghanistan* (New York: St. Martin's Press, 1988), 203.

central cause.  General Gulzarak Zadran, a former Afghan Army soldier who joined the resistance after the Soviet invasion, said after the war: "[w]e were a very desperate people without much equipment or armaments, but we had the power of our faith, love for our homeland, and love of freedom and reliance on the Almighty."[13]  Failure of the USSR to account for such moral inspiration was a strategic miscalculation.

Soviet leaders believed communism would carry broad appeal in Afghanistan.  They encountered a people more concerned with tribal loyalty and religious tradition than political belief.   They believed a demonstration of dominant power would create sufficient pliability to permit the imposition of a client government.  They found instead a non-unitary warrior society accustomed to violent segmentation and perfectly at home fighting as the underdog against heavy-handed tactics.  While this is not the forum for an exhaustive analysis of the USSR's strategic shortcomings, a basic grasp of these key themes is important.  It facilitates understanding how and why this superpower withdrew from Afghanistan after ten years and more than 15,000 killed in action, leaving in its wake more than one million dead Afghanis, between three and five million refugees, and a society ravaged by brutal destruction.[14]

Airpower played a substantive role in this outcome, but understanding that role meaningfully requires a deeper examination. The following discussion focuses on how airpower was applied against the mujahideen, with the goal of exploring and uncovering larger lessons concerning the role and relevance of airpower in COIN.

**Airpower and the Five Rings of the Enemy**

***Fifth Ring: Fielded Forces.***  Substantial Soviet airpower resources and effort were devoted to air operations against mujahideen

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[13] Ali Ahmad Jalali and Lester W. Grau, *The Other Side of the Mountain: Mujahideen Tactics in the Soviet-Afghan War* (Quantico, VA: US Marine Corps Studies and Analysis Division, 1995), 164.
[14] Grau, *The Bear Went Over the Mountain,* xviii.

fielded forces throughout the period of the Soviet-Afghan war.  The USSR viewed the insurgency as essentially a standoff between two fighting forces, and sought to capitalize on the modernity and technological advantage of its air arm.  Soviet air operations against the fifth ring of the mujahideen can be best understood according to the key warfighting functions it sought to fulfill.

Soviet airpower functioned most prominently as a firepower element seeking to win by kinetically crushing the opponent.  The traditional Soviet preference for large-scale operations created a routine of daily aerial bombardment that killed high numbers of combatants and non-combatants.[15]  A 1980 campaign in the Kunar Valley employed napalm in area bombing designed to clear large swaths of land of mujahideen resistance.  The goal was to soften enemy resistance before ground sweeps.  These napalm attacks killed approximately 1,500, including many resistance fighters, but the majority of the insurgents in the valley escaped due to the lack of a blocking force to seal the rear axis.[16]  The application of area-targeted firepower was not limited to rural operations.  An aerial attack on Herat in 1983, undertaken on the basis of intelligence indicating a strong mujahideen presence in the city, claimed the lives of approximately 3,000 residents, including an unknown number of rebels.  This indiscriminate approach is a reflection of Soviet frustration with the inability to identify insurgents and separate them from the population.[17]  Firepower was used as a shortcut to human sorting.

Rather than becoming more discriminate over time, Soviet airpower simply adapted more effective means of annihilation.  Vignettes from two of the ten large-scale offensives in the Panjshir Valley provide insight into the Soviet drive for efficient killing across broad areas.

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[15] Roy, *The Lessons of the Soviet/Afghan War,* 50.
[16] Cordesman and Wagner, *The Lessons of Modern War Volume III,* 36.
[17] Scott R. McMichael, *Stumbling Bear: Soviet Military Performance in Afghanistan* (London: Brassey's, 1991), 82-83.

*Panjshir V* applied a massive weight of airpower to the softening of enemy resistance prior to the introduction of ground troops, with uncontested medium-altitude bombing taking place continuously during daylight hours for an entire week. Villagers adapted by leaving their homes before dawn to hide among the hills, only to return at night. This pattern was also adopted by insurgents, who remained largely unscathed while the valley's population suffered from the destruction of scores of homes.[18] Two offensives later in *Panjshir VII*, the USSR employed 36 high-altitude bombers Tu-16 bombers under the assumption that carpet-bombing from a higher altitude would carry greater odds of catching resistance fighters off-guard, leading to higher body counts. But while high-altitude bombing did have a greater impact on the mujahideen than that achieved in previous offensives, it was not strategically significant.[19]

Distributed garrisons and massed operations created the need for a logistical system that required aerial protection, and this type of defensive support accounts for a significant weight airpower applied by the USSR to fifth ring targets.[20] As Soviet leaders recognized the operational inefficacy of DRA troops and began placing Soviet garrisons closer to enemy areas, the problem of force sustainment compelled the 40th Army to conduct an ever-increasing number of road convoys. With limited roads available, Soviet movements became predictable and presented a ready target for insurgents, threatening the Soviet goal of keeping casualties low. In response, commanders lent significant airpower resources to convoy protection.[21]

Still, there was not enough airpower to provide overwatch for the staggering logistical demands of the dispersed Soviet army, and aerial convoy escort airpower proved to be something less than a panacea when

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[18] Urban, *War in Afghanistan,* 102.
[19] Ibid., 144. See also Cordesman and Wagner, *The Lessons of Modern War Volume III,* 50.
[20] Blank, *Operational and Strategic Lessons of the War in Afghanistan,* 48.
[21] Amstutz, *Afghanistan,* 149.

it was available.  Soviet doctrine called for systematic aerial sweeps in advance of convoy arrivals, but these sweeps often did more to alert the mujahideen than they did to suppress attacks.[22]  The necessary abandonment of the 1980 Kunar Offensive due to insufficient logistical support was an early signal that the logistical design chosen by the USSR would become an operational Achilles' heel.[23]  By mid-war, Soviet commanders were making a noticeable effort to gain greater advantage from the rapid force projection capability of their air forces.

After using ground convoys extensively in the early period of the war, Soviet commanders increasingly shifted responsibility for supply and logistics to its helicopter force.[24]  Twin realizations catalyzed this shift.  First, leaders found that two-thirds of Soviet manpower was spent on securing garrisons and protecting key lines of communications (LOCs). Second was the dawning realization that this defensive posture was ceding almost complete tactical initiative to the mujahideen. [25] Soviet formations on large sweeps through key terrain often exhausted significant sums of life and fighting strength only to find that mujahideen forces had escaped due to their terrain familiarity and the failure to block key routes.

Commanders addressed these issues by using helicopter aviation to remove pressure on ground mobility, achieve surprise, increase tactical agility, and restore a sense of initiative.[26]  Rather than arriving in battle areas in large truck convoys for grand sweeps, Soviet soldiers were increasingly ferried into combat aboard Mi-6, Mi-8, and Mi-24 helicopters.  There they were typically employed in small, detached teams

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[22] The Russian General Staff, *The Soviet-Afghan War: How a Superpower Fought and Lost,* trans. and ed. Lester W. Grau and Michael A. Gress (Lawrence, KS: University Press of Kansas, 2002), 207.
[23] Martin Ewans, *Conflict in Afghanistan: Studies in Asymmetric Warfare* (London: Routledge, 2005) 129.
[24] Blank, *Operational and Strategic Lessons of the War in Afghanistan,* xii.
[25] Cordesman and Wagner, *The Lessons of Modern War Volume III,* 41.
[26] McMichael, *Stumbling Bear,* 84.

performing blocking maneuvers that enhanced the effectiveness of main force sweeps by obstructing escape routes.[27]  Not only were heliborne troops able to respond more swiftly to unfolding tactical situations than their truck-mounted counterparts, they were better rested and more effective upon arrival, a notion not lost on a Russian veteran of the war, who wrote that "[i]t was always a lot easier on us when the helicopters took us to the mountains; you went to the airfield, boarded the copter, and in an hour you were there."[28]  The USSR employed heliborne tactics during the *Panjshir III* campaign in 1982 only to find that insufficient numbers and mujahideen cunning allowed too many rebels to slip the cordon.[29]  But two years later during *Panjshir VII*, the Soviets demonstrated adaptation by coordinating a mass envelopment involving 2,000 troops simultaneously delivered into the valley.  This effort was successful, and demonstrated a new enthusiasm for heliborne raids that was noticed by the mujahideen, who realized Soviet tactics were evolving at a threatening pace.[30]  The Soviet pattern between 1983 and 1986 demonstrated an increased reliance on air mobility to threaten guerrilla sanctuaries and reduce ground movements.  Transport aircraft increasingly supplied isolated and surrounded garrisons such as Bamiyan, Ghazni, Gardez, and Khowst by both airland and airdrop methods, providing these outposts with vital sustainment.[31]  Taking this cue, the mujahideen began to appreciate in earnest the value of air superiority.[32]  While heliborne insertions proved initially problematic for the mujahideen, they learned to alleviate this threat with air defense ambushes.[33]  While this mujahideen adaptation will be discussed in

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[27] Blank, *Operational and Strategic Lessons of the War in Afghanistan,* 74.
[28] Vladislov Tamarov, trans. Naomi Marcus, Marianne Clark Trangen, and Vladislov Tamarov, *Afghanistan: Soviet Vietnam* (San Francisco, CA: Mercury House, 1992), 28.
[29] Curtis Cate, ed., *Afghanistan: The Terrible Decade 1978-1988* (New York: American Foundation for Resistance International, 1988), 25.
[30] Urban, *War in Afghanistan,* 149.
[31] McMichael, *Stumbling Bear,* 82, 85.
[32] Ibid., 211.
[33] Jalali and Grau, *The Other Side of the Mountain,* 227.

greater depth, it is sufficient to note here that this complication demonstrated to the USSR that there were limits to an operational design dependent on air mobility.

Ultimately, Soviet air mobility proved indecisive in the search for a military victory over the mujahideen. This was not because of a lack of resources. The Red Air Force had delivered more than 15,000 troops into Afghanistan in less than 24 hours to start the war, demonstrating a startling force projection capability that might have been a game-changer in the fight against insurgents insurgents. But while the Soviets sensed the need for a fundamental shift from ground to air mobility, there was a failure to bring resources into alignment with that shift.[34] France had relied on an 800-helicopter fleet to sustain and project more than 500,000 troops across Algeria, a nation more than three times the size of Afghanistan, and found helicopter mobility important to the achievement of a military victory. The French achieved a ratio of one helicopter for every 625 troops. By contrast, the USSR employed 600 helicopters in support of a ground force of 110,000 in attempting to pacify a considerably smaller area, and was unsuccessful despite a ratio of one helicopter per 183 troops. While differences in terrain, insurgent performance, and myriad other factors must be considered in explaining the overall outcome of the Soviet-Afghan conflict, the inability of the USSR to effectively organize and exploit its own air mobility resources is part of the explanation for why it was unable to militarily defeat the mujahideen. Some of this inability can be traced to elements of Soviet military culture worth exploring in this discussion.

The Soviet military entered Afghanistan with a culture that held airpower purely subject to ground force prerogatives, and this hampered air-ground coordination in key ways throughout the war. Operations were seldom planned jointly. Instead, ground force coordinators levied

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[34] Blank, *Operational and Strategic Lessons of the Soviet-Afghan War,* xiv.

requests for air support during planning or execution, and such requests were typically routed to higher echelons before being answered.[35]  As a result, interoperability was diminished and operations took on a compartmented rather than joint character.  In one operation southeast of Kandahar in 1986, air commanders charged with pre-raid support conducted a full three hours of airstrikes, thereby undermining the tactical surprise that had been a primary objective for ground commanders.  Although the operation was counted as an overall success, the warning and time given to the mujahideen permitted their dispersal, resulting in very few captures.[36]  In another instance, *bronegruppa* (motorized infantry) forces were tasked to take distant envelopment positions and await the conduct of pre-assault aerial fires before rapidly closing on a mujahideen position.  Due to poor coordination, *bronegruppa* elements moved too close and alerted enemy forces, significantly reducing the effectiveness of the ensuing airstrike.[37]  These anecdotes portray an image of two teams trying to work together without truly taking on the shared identity of a single team.  This theme is reinforced by evidence from a 1985 border operation in Kandahar province.  Soviet forces orchestrated a combined arms sweep of a canyon area thought to contain hundreds of mujahideen.  After two days of fierce fighting, Soviet commanders declared the operation a success.  Soviet Lieutenant Colonel S.I. Pariy remarked "[o]ur battalion had no irrevocable losses."  Yet the Soviet force had lost four Mi-8 helicopters and twelve aircrew members in an operation that claimed only 35 enemy dead.[38]  While body count comparisons make a poor measure of effectiveness, the remarks of this Soviet battalion commander are telling.  They demonstrate a fundamental separation of identity between ground

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[35] Ibid., 72.
[36] Grau, *The Bear Went Over the Mountain,* 58-59.
[37] Ibid., 80.
[38] Ibid., 100.

and air forces, a condition not inconsistent with pre-existing Soviet doctrines and out of joint with the interdisciplinary demands of COIN.

Soviet air operations against insurgent fielded forces developed a finely tuned pattern. Heavy preparatory bombardment of an area preceded the heliborne insertion of blocking forces, which was typically followed by an aerially covered main force sweep.[39] This style of operation proved more successful in rural highlands and flat desert than in difficult mountain terrain, but its character and choreography demonstrate a considerable degree of Soviet adaptation over time. However, the mujahideen also adapted.

As the USSR forces became continually more dependent on airpower, the mujahideen achieved a technical advantage that made Soviet reliance on airpower a matter of strategic significance. The 1986 introduction of the Stinger air defense missile, covertly supplied by the US to mujahideen fighters, fundamentally altered the calculus of the conflict and put military victory out of reach for Soviet forces.

The appearance of the Stinger on the Afghanistan battlefield undeniably changed the character of Soviet operations in major ways. As early as 1981, a mujahideen commander publicly stated the Mi-24 was the biggest advantage held by Soviet forces.[40] In fact, mujahideen forces understood the concept of air superiority well enough to employ Soviet-made SA-7 man-portable air defense missile to contest Soviet access to the skies, and modest successes against the casualty-averse 40th Army initially forced Soviet aircraft to fly at higher altitudes. This reduced effectiveness, but the Soviets were quick to outfit their aircraft with flare systems that defeated the SA-7 and re-asserted Soviet air superiority. By 1986, the counterinsurgency had become heavily reliant on air superiority to unlock other airpower functions, most especially mobility and CAS. As Stingers found their way into the hands of mujahideen

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[39] Roy, *The Lessons of the Soviet/Afghan War,* 18.
[40] Cordesman and Wagner, *The Lessons of Modern War Volume III,* 40.

rebels, there was a demonstrable spike in helicopter and fixed-wing air losses for the USSR. While the SA-7 was only effective when aimed directly at the exhaust plumes of aircraft and could be fooled by decoy flare systems, the Stinger brought all-aspect and flare rejection capabilities for which the Soviets had no technical answer.[41]

As the rate of shoot-downs spiked alarmingly, the USSR was thus forced to change tactics. Increasing numbers of Soviet ground missions found their CAS allocations removed by risk-averse commanders.[42] Heliborne assaults were significantly reduced.[43] The USSR soon halted the use of helicopters for casualty evacuation in remote areas, a practice that had saved countless lives throughout the conflict.[44] Observers noted a virtual disappearance of Soviet helicopters from the Afghan skies.[45] The impacts of Stinger upon the Soviet effort to militarily defeat insurgents in the field were crushingly negative. The removal of CAS from ground maneuvers triggered a spate of desertions in 1987.[46] Reductions in rapid casualty evacuation demoralized Soviet troops in the field, damning them to death where treatment had previously been possible.[47] The cumulative effect of reduced air cover was an exacerbation of the latent Soviet aversion to battlefield casualties. Fewer tactical options were available for the construction of anti-mujahideen operations, and insurgents soon found increased freedom of movement. This story of reciprocal adaptation is rich with airpower lessons, but it only part of the story of Soviet airpower in Afghanistan. While the Red

[41] Ibid., 89-91.
[42] Cate, *Afghanistan,* 37.
[43] Cordesman and Wagner, *The Lessons of Modern War Volume III,* 132.
[44] Steve Coll, *Ghost Wars: The Secret History of the CIA, Afghanistan, and Bin Laden, From the Soviet Invasion of Afghanistan to September 10, 2001* (New York, Penguin, 2005), 150.
[45] "Stingers Change the Face of the War in Afghanistan," *Jane's Defence Weekly,* 10 October 1987, 785.
[46] Cate, *Afghanistan,* 37.
[47] Coll, *Ghost Wars,* 150.

Air Force spent significant energy in the fight against insurgents, airpower was also applied in considerable measure to population targets.

**Fourth Ring: Population.** Had Soviet airpower not deliberately targeted the Afghan population and merely followed a natural course of warfighting adaptation, it is likely there would still have been incidental and negative population effects. But Soviet airpower operations *did* in fact actively target the population, producing effects of such enormity that one analyst has asserted the USSR did proportionately greater harm to the people of Afghanistan that that harm done to the USSR by Nazi Germany in WWII.[48] Heavy aerial bombardment, often independent from or disjointed from ground operations, characterized Soviet operations throughout the war. This led to a majority of civilian casualties.[49]

From the early stages of the Soviet-Afghan War, reciprocal attacks occupied a substantial weight of Soviet airpower effort. Insurgent attacks, which tended to be surprise ambushes designed for shock value, were routinely answered with destructive Soviet air attacks.[50] At the outset of the war, former DRA commander Ismail Khan led his troops in a violent uprising in the western city of Herat. His army hunted down and killed Russian political advisors and their families, and the USSR answered with a massive and lengthy aerial bombardment that killed an estimated 20,000 Afghans but failed to kill Khan himself.[51] As Khan melted into the countryside to foment further rebellion, the Soviets continued to define airpower as a preferred reciprocal weapon, killing another 1,000 civilians in the Kunar Valley in April 1979 in response to insurgent attacks suspected to have emerged from there.[52] Summer 1980 brought another round of attacks on pro-guerrilla villages as punishment for insurgent attacks, as the USSR used airpower to enforce

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[48] Grau, *The Bear Went Over the Mountain,* xviii.
[49] Derek Leebaert and Timothy Dickinson, eds., *Soviet Strategy and the New Military Thinking* (New York: Cambridge University Press, 1992), 162.
[50] Amstutz, *Afghanistan,* 146.
[51] Coll, *Ghost Wars,* 40.
[52] The Russian General Staff, *The Soviet-Afghan War,* 30.

collective responsibility.[53]  This pattern of reprisal remained evident throughout the course of the conflict.  While there is anecdotal evidence of village leaders stopping mujahideen operations from their areas following air attacks, reprisal attacks did little overall to contribute to Soviet objectives.[54]  While reprisal attacks appear in retrospect to have been an impulsive use of airpower, the USSR was much more deliberate in other air operations against the Afghan population.

Part of the Soviet answer to the human sorting problem of the Soviet-Afghan War was a systematic campaign of depopulation.  The USSR was unwilling or unable to conduct the kinds of operations necessary to sort insurgents from ordinary civilians, and thus sought an operational shortcut that would eliminate insurgent sanctuary through the eradication of populations and living space.  Airpower played a central role in this strategy by helping Soviet leaders limit casualties, maintain low troop presence, and deploy huge levels of firepower efficiently.[55]  As ground troops finished sweeps of insurgent strongholds and moved back to garrison, they would leave behind a network of booby-traps and mines to dissuade populations from returning.  It was thought this would create a barren Afghanistan that would contain continually fewer insurgent operating areas.  The Red Air Force supported these efforts with mass deliveries of anti-personnel mines, many shaped to look like toys or other ordinary items.[56]  Over time, these efforts escalated, with the use of fuel-air bombs designed to incinerate villages and farmlands widely employed by 1984.[57]  Even chemical weapons were delivered via rockets, bombs, and spray nozzles from

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[53] Cordesman and Wagner, *The Lessons of Modern War Volume III,* 39.
[54] Abdulkader H. Sinno, *Organizations At War In Afghanistan and Beyond* (Ithaca, NY: Cornell University Press, 2008), 151.
[55] Ewans, *Conflict in Afghanistan,* 133.
[56] Cate, *Afghanistan,* 29.
[57] Cordesman and Wagner, *The Lessons of Modern War Volume III,* 51.

fighters and helicopters, adding a terrifying edge to mass killing in an attempt to deter any notion of repopulation.[58]

The Soviet policy of scorched earth in Afghanistan was ineffective for two main reasons. First, despite being a deliberate strategy, it was not well-organized. USSR efforts in some areas were clearly aimed at depopulating, while neighboring areas received more nuanced efforts. While the Panjshir Valley population was driven from 80,000 to 45,000 during the first several years of the war, many of the civilians who fled simply moved to neighboring areas and presumably carried with them the same habit for mujahideen support.[59] Second, the fear the USSR hoped to create through counter-population bombing spiraled rapidly into panic, and creating huge refugee flows over the borders of Pakistan and Iran. While this might seem coherent with the Soviet goal of a barren Afghanistan, it actually made the insurgency much more complex by widening its geographic scope, involving third parties, and creating additional disorder. The disorder created by these operations complicated other efforts.

***Third Ring: Infrastructure.*** Soviet airpower applied to countering mujahideen infrastructure was comparatively modest and relatively ineffective. Aircraft sometimes found themselves searching for and threatening enemy caravans, although such intelligence-intensive operations were neither widely attempted nor especially successful.[60] More often, infrastructure attacks were undertaken as an incident to depopulation efforts. Scorched earth attacks, such as a Kunar Valley operation in 1980 that used aerial attack to clear 150,000 inhabitants in just a few days, often had the secondary aim of cutting major insurgent

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[58] Amstutz, *Afghanistan,* 173-175. While chemical weapon use by the USSR remains in dispute, US satellites photographed chemical decontamination equipment within the country during the period of suspected use. Since Afghanistan possessed no chemical weapons, the only logical conclusion is that the Soviets were indeed using them. This conclusion was contemporarily corroborated with anecdotal reports.
[59] Urban, *War in Afghanistan,* 110.
[60] The Russian General Staff, *The Soviet-Afghan War,* 231.

supply routes.[61]  As these types of attacks intensified, insurgents learned to disperse supply routes, operate among the 200 mountain passes on the Afghan-Pakistan border, and utilize secondary caches to deny the USSR discernible targets.  This coaxed the USSR deeper into search-and-destroy operations that consumed vast resources with only modest gains.[62]  Aerially delivered mines were employed as an expedient measure to counter mujahideen exploitation of mountain terrain, with perhaps as many as one million dropped into suspected enemy transit zones.[63]  Mining was expected to limit mujahideen maneuver, making Soviet ambushes more effective by reducing the number of possible supply routes.  However, only 15% of more than 24,145 attempted Soviet supply ambushes were deemed effective throughout the war, while the airdropped mines left lasting effects on the rural population and Soviet political legitimacy.[64]

Frustration with the intractability of external sanctuary also compelled the USSR to commit border violations that were both unsuccessful and affirmatively harmful to Soviet designs.  While these violations can be seen as population attacks in their attempt to discourage support to the insurgency, they were often designed primarily to destroy sources of external support.  As Soviet frustration built, the number of violations increased, with 83 border incursions recorded in the first half of 1985 alone, measured against 88 in the entire previous year.

***Second Ring: Organic Essentials.***  The Soviet approach in Afghanistan exhibited a near-complete absence of airpower operations affirmatively geared toward contending with the second ring.  The absence of a hearts-and-minds strategy caused the population to move from passive assistance to active support by the mid-1980s, multiplying

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[61] Cate, *Afghanistan,* 19.
[62] Ibid., 402.
[63] Urban, *War in Afghanistan,* 186.
[64] Spasibo, "Lessons of Operations in Afghanistan," 8.

the difficulty of the insurgency for the USSR.[65]  Soviet heavy-handedness, with airpower at its core, "all but guaranteed that no matter how much the people of Afghanistan disliked each other, they would dislike the Soviets even more."[66]  The loss of air superiority late in the war, something upon which the USSR had become highly dependent for its conduct of operations, ended any chance for airpower to work affirmatively against the cause, idea, and legitimacy of the mujahideen.

*First Ring: Leadership.* Airpower operations against insurgent leaders did not comprise a significant weight of Soviet effort.  Aside from anecdotal instances of helicopter raids on rebel leadership safe houses and suspected hideouts, airpower was applied very little in this area. Soviet commanders believed that the enemy they faced would not be paralyzed or appreciably disabled by the loss of a key leader, and chose instead to concentrate airpower in other areas.

**Airpower and the Enemy Organizational System**

The role and relevance of Soviet airpower in the Soviet-Afghan War is best understood as a function of how it interacted with the enemy organization at the system level.  Exploring the degree to which USSR air operations reflected an understanding of insurgent organization is a useful means of tying Soviet airpower to the overall outcome of the COIN campaign in Afghanistan.

USSR airpower efforts in Afghanistan were primarily concerned with killing mujahideen insurgents, and this demonstrates a lack of understanding of the role of fielded forces in the insurgent organizational system.  Vast resources were devoted to direct attack, mobility, and escort missions aimed at attempting to kill enough mujahideen to end the insurgency, but such efforts were largely ineffective.  More than 11,500 heliborne troops were landed in the Kunar Valley in 1985 in a

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[65] Shultz and Dew, *Terrorists, Insurgents, and Militias,* 170.
[66] Corum and Johnson, *Airpower in Small Wars,* 394-395.

clearing operation. They achieved anecdotal success in piling up insurgent body counts, but within weeks of main force exodus, the valley succumbed to mujahideen control.[67]  This type of futility plagued Soviet operations against fielded forces.  Nonetheless, the objective of piling up enemy dead consumed the lion's share of Soviet airpower.  This stands in tension with the fact that fielded forces represent only a modest fraction of the overall functioning of an insurgency, which draws heavily on non-physical requirements and is animated by political change rather than military prowess.

By contrast, USSR airpower operations were comparatively unconcerned with mujahideen leadership targets.  USSR airmen seemed to grasp that the elimination of a groups of key mujahideen leaders would not disrupt the insurgency's basic functioning.  They had a less certain grasp, however, on the role of the population.

USSR air operations against the population of Afghanistan demonstrate an utter absence of strategic consideration of how insurgencies function.  Soviet air operations against the population can be construed as both incidental and purposeful, with catastrophic cumulative effects.  The difficulty of sorting between insurgents and civilians led Soviet airmen to use areas attacks that targeted insurgents with a disregard for non-combatants.  As a result, too many of the wrong people were harmed by Soviet airpower.  Early in the war, the transformation of Kabul after nightfall from the peaceful seat of communist legitimacy into a thriving den of insurgent support provided a signal that indiscriminate bombing was doing little to contend with the insurgency.[68]  The Soviets missed the signal, and eventually took the next step into actively terrorizing Afghanis.  40th Army and higher echelon commanders bombed the countryside and several urban areas

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[67] Nikolay Spasibo, "Lessons of Operations in Afghanistan," from conference *Russian Military Doctrines and Reforms in the 20th Century* (Moscow: Veterans of the Fatherland Publishing Centre, 1997) 7.
[68] Amstutz, *Afghanistan,* 140.

as a means of deterring civilian support for the resistance. By the end of 1984, Kandahar, Herat, and dozens of other villages lay in ruins, leveled by Soviet airpower.[69] Red Air Force bombers razed and mined rural areas in attempts to depopulate the countryside, eliminating the ability of insurgents to immerse within the population. This created disorder, eroding the governing capacity of the DRA, but it did not trigger a change in the Soviet approach.[70] As late as 1987, mass air attacks designed for scorched earth were still a prominent feature of operations. Coupled with Soviet exploitation of Afghan natural resources such as gas and copper, attacks on farming left the Afghan economy in shambles, guaranteeing that any potential client state would be dependent on the USSR for subsistence.[71] All of this seemed to betray any earnest effort to end the insurgency by winning the support of the population. Insurgencies require population support for basic functioning, and airpower attacks victimizing civilians tended to drive more Afghanis to the mujahideen cause, demonstrating a failure to carefully consider the use of airpower in a different kind of war.

The level of physicality evident in USSR airpower operations was drastically inconsistent with the largely non-physical nature of insurgent requirements. There is no evidence of a desire for discriminate effects, and Soviet weapon innovations were concerned only with achieving greater kinetic effectiveness. Parachute-retarded bombs permitted low-altitude attack in valley areas. 60-bomblet cluster munitions allowed aerial attack of a 200,000 square-foot target area. These adaptations simply made the Soviets more tactically adept at fulfilling an inappropriate strategy as they sought to kill their way out of the insurgency.[72] Little evidence exists that USSR air strategists gave sober

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[69] Ibid., 133.
[70] Roy, *The Lessons of the Soviet/Afghan War,* 20.
[71] Cordesman and Wagner, *The Lessons of Modern War Volume III,* 58.
[72] Ibid., 121.

consideration to the non-physical nature of insurgency, which might have guided a less physical approach.

The role of Soviet airpower in Afghanistan can be understood as a series of mujahideen organizational behaviors emerging from the interplay of USSR airpower and targeted insurgent subsystems. When the USSR targeted fielded forces, operations also tended to severely impact the population, implying a negative link between the fifth and fourth rings. Civilian deaths fed the mujahideen cause, enhanced the recruitment of adherents, and fed the mujahideen propaganda machine with considerable ammunition with which to convey a message of Soviet brutality. Air operations against population offended international norms and created a refugee crisis in neighboring Pakistan, bringing key moral and material support to the cause of the mujahideen. This implies that the link between the fifth and fourth rings in the mujahideen system continued as a link from the fourth to the second ring, and that this latter link was extremely sensitive to indiscriminate airpower effects. Soviet air operations against infrastructure targets exacerbated refugee problems, outraged human rights advocates who objected to the mining of tribal lands, and left Afghan farmers without arable land. This left many with little choice but to join the insurgency in order to support their families and tribes. This implies a link between the third and second rings of the mujahideen that continued as a link to the fifth ring, with a growth in fielded forces taking place as a result in an inflation of organic essentials brought on by Soviet methods against infrastructure.

The behavior of the mujahideen organizational system when subjected to Soviet airpower followed three discernible patterns that help explain the outcome of the Soviet-Afghan War. First, kinetic airpower targeting mujahideen fielded forces impacted the Afghan population, which became increasingly disaffected and disinterested in the prospect of supporting communist goals. Afghan citizens whose dignity was culturally tied to self-sufficiency took attacks on farming as attacks on

their ancient way of life, and mujahideen support gathered across the countryside.[73]  Soviet staffers believed they faced a force of 90,000 to 250,000 active mujahideen at mid-war, but that the true number of insurgents was close to 750,000 when including anyone taking an active role.[74]  This demonstrates the potential for spillover effects to fundamentally change the calculus of an insurgency.

Second, kinetic airpower operations against population targets inflated the organic essentials available to the mujahideen.  The liberal use of heavy-handed methods against population targets legitimized the insurgency within Afghanistan and across the world. The USSR found itself incurring a rising level of international disapproval for the character of its counter-population operations.[75]  In November 1986, the United Nations voted 122-20 in favor of a Soviet withdrawal from Afghanistan, citing reports of the aerial bombings of 100 villages and the killings of 10,000-12,000 civilians in the preceding nine months.  The report also estimated that 6,000-8,000 refugees per month were crossing into Pakistan, and presciently judged that the mujahideen were in firm control of the majority of the Afghan population.[76]

Third, the additional organic essentials available to the mujahideen provided a rapid source of additional fighting strength to the insurgent organization.  With over three million refugees inhabiting its northwestern provinces by mid-war, Pakistan was unable to effectively police refugee populations, and soon the mujahideen found bottomless recruiting pools among burgeoning camps of frustrated and victimized Afghans.  By sowing the seeds of disorder with aerial population attacks, the USSR wandered further from its goal of a pacified Afghanistan.[77] Moreover, the image of helicopter gunships roaming the Afghan

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[73] Richard H. Shultz, Jr. and Andrea J. Dew, *Insurgents, Terrorists, and Militias: The Warriors of Contemporary Combat* (New York: Columbia University Press, 2006), 175.
[74] Corum and Johnson, *Airpower in Small Wars,* 394-395
[75] Cate, *Afghanistan,* 24 and McMichael, *Stumbling Bear,* 93.
[76] Cordesman and Wagner, *The Lessons of Modern War Volume III,* 68.
[77] Cate, *Afghanistan,* 29.

countryside laying waste to villages animated the international community, leading many nations to contribute money and material to the mujahideen. The most significant articulation of this third system response is the introduction of the Stinger missile into the conflict by the US.  Soviet heavy-handedness made the Stinger export possible. Presidential, Congressional, and intelligence community consensus was necessary to put the missile into the war, and such consensus would have been impossible to reach in the absence of the egregious and broadly condemned actions of the USSR.  Without such actions, too many would have remained attuned to the risk of escalating Cold War tensions by choosing sides in what would have been considered essentially a Soviet frontier problem. [78]  The loss of legitimacy incurred by the Soviets for its depopulation activities, largely performed by airpower, made the introduction of Stinger possible by making it less likely that the Soviets would escalate superpower tensions over a third-party intervention in the face of perceived war crimes.  This key change put the war beyond Soviet grasp.  The shoot-downs of huge numbers of helicopters and some transports in 1986-87 convinced Soviet high command that flight was not safe anywhere in the country.  This loss of air superiority, coupled with Soviet risk aversion, resulted in the removal of essential aerial services from ground troops, who mutinied in some cases and fought far less effectively in others.[79]

The failure of Soviet COIN strategy, including airpower, to account for key relationships between and among mujahideen organizational subsystems created an insurgency with sufficient political strength to outlast a superior power, and a continuing well of military strength that led to insurgent military victory.  The result was a political and military defeat that helped account for the disintegration of the USSR.

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[78] Ibid., 61.
[79] Ibid., 69-72.

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**Conclusion**

The legacy of Soviet airpower in Afghanistan is one of a strategy doomed from the outset. Airpower operations were carried out within a fundamentally flawed warfighting approach that applied indiscriminate firepower to bear on a prostrate population that turned from political indifference to stout rejection of a brutal occupier. The USSR never attempted to affirmatively vie for the allegiance of the Afghan people. Force was substituted for human relations. Psychological operations, humanitarian assistance, and policing operations were never considered. Favor was given to reprisal, area bombing, depopulation, mining, and punishment. Such an approach could never have earned popular legitimacy, which meant that annihilation was the only alternative. The USSR was content to pursue such a strategy, believing that even if it exterminated the Afghan people, a vibrant communist regime could be constructed in their absence.

Airpower was ultimately a net disadvantage for the USSR because of the manner in which it spearheaded a horribly misguided annihilation strategy. An excessive focus on fielded forces and an inappropriate level of physicality characterized air operations, in defiance of the nature and characteristics of the enemy. Soviet airmen failed to account for the complex behavior of an insurgency, and unwittingly made the mujahideen morally, mentally, and physically stronger in heavy-handed attempts to make it physically weaker. Destructive operations targeting the population produced disadvantageous consequences other areas, suggesting a particular sensitivity of insurgencies to the application of kinetic airpower. In failing to consider the political and perceptual sensitivity of employing an asymmetric capability, the USSR failed to shape its airpower accordingly. Because of the asymmetric advantage airpower grants to counterinsurgents, it can easily be perceptually shaped by insurgents a weapon of repression, and this will be noticed by those sitting in judgment of the legitimacy of each side of the conflict.

The image of a superpower indiscriminately slaughtering civilians without appreciable contestation is an image likely to alienate, rather than attract, internal and external observers. Reports of Soviet gunships laying waste to rural Afghan villages, annihilating anyone unfortunate enough to be caught in the crossfire, did much to turn the world against the war effort. In this way, airpower asymmetry was a *significant disadvantage* for the USSR, as it led to the imposition of political and military limits that made victory unachievable. Soviet legitimacy continually eroded throughout the war, as every indiscriminate bombing and mining operation strengthened the enemy politically.

The most valuable conclusion evident from the USSR airpower experience in Afghanistan is that the absence of a deliberate strategy respectful of the unique character of insurgency severely limited what the USSR could achieve. The findings decoded through use of the EAS lens illustrate an insight previously highlighted in both the France-Algeria and US-Vietnam cases: an air force approaching COIN absent a grasp of how an insurgency operates will likely be seduced by its own talents, which most often involve the exercise of heavy aerial firepower. In failing to comprehend the type of war it was undertaking, the USSR failed to shape airpower into the scalpel needed for COIN. Airpower instead came to symbolize a brutal hatchet. This led to Soviet defeat. This underscores the importance of shaping the airpower weapon with a deliberate strategy.[80] As highlighted by France and America in the 1960s, the expedient application of airpower in an insurgency carries the risk of severe consequences, to include losing the war by trying to win it the wrong way.

The Soviet-Afghan War reveals an associated but distinct lesson for US airpower strategists: air superiority is critically important and cannot be assumed. While it has been popularized as a simple matter of

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[80] Leebaert and Dickinson, *Soviet Strategy and the New Military Thinking,* 169.

controlling the skies, air superiority is better understood as the key to aerial freedom of action. With air superiority, the USSR found a broad range of operations possible. *Spetznaz* and airborne troops became key elements in every major operation by providing rear blocking made possible by vertical envelopment. A free-moving airborne logistical network allowed the USSR to sustain distributed forces in difficult terrain, thereby keeping forces close to enemy strongholds and limiting enemy movement. The loss of air superiority removed these advantages and left ground forces infinitely less capable. Without the reach, presence, and projection of airpower there to threaten insurgent freedom of movement, the mujahideen were better able to leverage terrain familiarity and opportunism to disrupt Soviet objectives. The loss of Soviet air superiority stands as the most significant development of the war, as it negated any chance for a Soviet military or political victory. Had the USSR assumed enemy contestation of air superiority, it might have devoted more resources to developing the self-protection capabilities of its vitally important aircraft. Thankfully, it did not, and instead suffered a defeat for the ages.

# Chapter 8

## Conclusions and Recommendations

*The organization of men and machines into military forces does not necessarily mean that they are equipped and trained for the accomplishment, if necessary, of decisive action in war. For this, the discipline of a coherent body of thought appears to be indispensable.*

*--Eugene Emme*

*If we should have to fight, we should be prepared to do so from the neck up instead of the neck down.*

*-- Jimmy Doolittle*

### Conclusions

This thesis set out to demonstrate that John Warden's *Enemy as a System* (EAS) theory of airpower could help explain and anticipate the role and relevance of airpower in counterinsurgency (COIN). Application of EAS to historical cases of airpower in COIN illuminated a number of conclusions and commonalities that support this assertion.

Through the Warden lens, it is evident that all three counterinsurgent air forces applied airpower inappropriately by failing to grasp how insurgencies are organized. Each power became concerned with conducting operations against fielded forces without realizing the marginal role of guerrilla fighters in the vital functioning of the insurgency. In all three cases, "killing bad guys" consumed tremendous levels of energy with little noticeable impact on the political viability of the rebellion. Only the French managed a military victory, and it was explained more by successful isolation and pacification efforts than by the hunting and killing of insurgents. Insurgencies are much less concerned with military activity than with the political cause animating their movement. Airpower efforts should be shaped to reflect this attribute of insurgency warfare.

Each counterinsurgent air force examined in this study also applied airpower to the population in ways inconsistent with an understanding of the functioning of insurgencies. John Paul Vann once remarked that insurgency is a "political war and it calls for discrimination in killing." He also argued that in such a war, a rifle was the best weapon and an airplane the worst, because a counterinsurgent needed to know exactly whom he was killing. Airpower practitioners in all three cases confounded Vann's logic. While the French were least concerned with direct targeting of population elements, they were insensitive to civilian losses and allowed non-combatants to become the incidental objects of reprisal. The French allowed the logic of collective responsibility to characterize some of their airpower actions, leading to punishment strikes against suspected supporters. By alienating otherwise indifferent members of Algerian society, these attacks did much more to fuel the insurgency than to deflate it. In both the US and USSR cases, an utter disregard for civilian life characterized operations against fielded forces, and in Afghanistan, the Soviets deliberately engaged in extermination efforts. Whether by incident or deliberation, all of these powers failed to understand that air attacks against civilians carried profound second-order effects. By undermining the legitimacy of the COIN enterprise, each power allowed that legitimacy to be seized by the insurgent. Political strengthening of the rebellion thus correlated very closely with airpower population attacks in all three cases.

None of the three air forces examined applied airpower in a manner consistent with the predominantly non-physical nature of insurgency. France was the least kinetic of the three in its approach and got closest to a victory, while the USSR was most kinetic and fell most short of its objectives. The US fell somewhere between these two on the kinetic spectrum and managed something approximating a stalemate. The pattern is clear: *an inverse correlation exists between the kinetic character of a COIN airpower approach and level of strategic success achieved.* This

is not a novel conclusion, given that attempting to wage physical war against a non-physical phenomenon is a violation of the Clausewitzian warning to avoid trying to make war into something "alien to its nature."[1] What led airmen to pursue such a fallacious approach?  Going to war without any notion of how airpower was relevant and what role it should play.

Each counterinsurgent air force in this thesis was pulled inexorably into COIN by carrying out a series of expedient adaptations undertaken without a unifying strategy.  In each case, the lack of a deliberate approach to translating a material airpower advantage into an actual battlefield advantage led airmen to be seduced by their own talents. Airmen entered the fight with kinetic and large force predilections, and were seduced into doing what they were good at in an attempt to make the best contribution possible to the war effort.  To borrow from Marshal de Saxe, airmen "in default of knowing how to do what they ought, are very naturally led to do what they know."[2]

In each case study covered in this paper, the absence of a deliberate guide for airpower resulted in the generation of unintended and adverse effects within the insurgent organizational system.  France's penchant for reprisal and collective responsibility led to the Sakiet raid, which led to international condemnation and a loss of political legitimacy for their COIN effort.  US airpower attempted to deal with the intractable VC insurgency by supporting and sometimes spearheading a strategy of attrition.  This led to considerable collateral effects among the agrarian population of South Vietnam, which in turn led to increasing popular support and tolerance for the insurgency.  As the US stepped up kinetic attacks designed for attrition, the VC strengthened, before finally culminating in the 1968 Tet Offensive that fundamentally undermined

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[1] Carl von Clausewitz, *On War,* trans. Michael Howard and Peter Paret (Princeton, N.J.: Princeton University Press, 1976), 88.
[2] Maurice Comte de Saxe, *Mes Reveries: Memoirs Upon the Art of War* (Westport, CT: Greenwood Press, 1971), 162.

US domestic support for the war effort. In trying to annihilate all potential insurgents, the USSR destroyed Afghan society, displacing and killing millions in the course of creating international outrage. That outrage led to material support for the mujahideen which, when combined with the limitless recruiting pools created by Soviet-induced refugee camps, made the insurgency self-sustaining. This led to the inability of the USSR to secure enough military success to credibly parlay for a political settlement, and the Soviets withdrew in humiliation. In all three cases, the lack of strategy led to the use of airpower as a hatchet when a scalpel was needed, and the use of a hatchet in turn led to a strengthened rather than weakened insurgency.

The three assertions made at the outset of this paper are thus borne out. EAS indeed unlocks the conditional advantage of airpower in COIN by explaining and guiding airpower strategy. In each of the cases in this study, EAS created a greater understanding of how airpower related to strategic outcomes and enemy responses, and made evident a wealth of strategic improvements that could have been realized had the theory been applied. EAS also demonstrates how COIN requires a fundamentally different airpower approach than Major Combat Operations (MCO). Kinetic operations against enemy fielded forces are central to MCO efforts, but must be circumspectly limited in COIN. EAS also shows the grave risks of airpower application in COIN absent a deliberate strategy. Without a careful approach, airpower can easily become an "asymmetric disadvantage" for those who wield it. EAS gives airmen a generic blueprint for enemy organizations and charges them with the responsibility to contextualize and tailor airpower according to a specific enemy and defined objectives.

To reinforce a disclaimer woven throughout the narrative of this study, Warden's theory cannot be taken whole cloth into COIN. Warden was right about a number of things, most critically the importance of knowing the enemy, the usefulness of systemic analysis, and promise of

airpower in contending with any type of enemy. Warden was prescient in renewing the ACTS precept that winning is not about contending with fielded forces, a proposition arguably even more relevant to COIN than to MCO. But he was also wrong on a few important accounts. Insurgencies are incredibly complex, adaptive systems that cannot be expected to absorb airpower effects without behavioral changes. They are neither static nor their behavior linear. Accordingly, the links and interdependencies in insurgent organizations are far more important than the subsystem bins we might use to analyze and target them if we applied Warden's theory blindly. More importantly, in an insurgency, *the population displaces leadership as the most important enemy subsystem.* Every airpower activity must be evaluated for what it might do to the population and what system effects might be generated. While Warden was reticent to involve the population in his vision of system warfare, doing so is absolutely critical and yet inescapably risky in COIN.

But where Warden's version of EAS falls most short is in the way it equates "enemy" and "system." This works well in state-on-state warfare, but in an insurgency it must be reconsidered. In such a context, the enemy, population, society, external actors, and myriad non-physical elements are all part of "the system." This is an important distinction, because the "insurgency system" must be approached holistically. Airpower alone won't suffice, and nor will military power. Political, social, economic, and military considerations must receive due weight when thinking about how to approach the insurgency system. This is not something Warden would likely quarrel with, since he fielded EAS with an expectation that strategists and planners would do their own thinking.[3] His version of the theory provides a solid base upon which to found a conditioned version that better explains COIN. This study provides a modest first step.

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[3] John A. Warden, interview with the author, 13 February 2009.

## Recommendations

> ***Develop an Institutional Theory of Airpower.*** As the nation's champion and leading voice for airpower, the US Air Force desperately needs a coherent theory of airpower to guide strategic deliberations. A separate theory should be developed for the application of airpower in COIN, with a simple central proposition: *airpower in COIN is primarily concerned with gaining and maintaining support and legitimacy in the eyes of the population.* All airpower roles, activities, and functions must be filtered through this governing principle. No mission should be undertaken that risks harming the population, unless the goal is self-defeat. Dead insurgents do not produce victory in COIN. Commitment to and alliance with the population does.

> ***Reconsider the Current Strategy in Afghanistan.*** As the US evaluates strategic options in Afghanistan, a senior policy discussion concerning the role of airpower in COIN should be undertaken transparently to allow for an open and vigorous debate. Operational trends in Afghanistan showcase an increasing reliance on CAS to proxy for ground troops.[4] This is driven by economy of force, but has generated a number of high-profile collateral damage incidents that threaten the entire enterprise.[5] This operational design must be fundamentally reconsidered. Kinetic attacks, even when they serve as airborne cover for ground forces, cannot be permitted in areas where civilians are present. The risks are too great.

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[4] Jim Michaels, "Airstrikes in Afghanistan Increase 31%," in *USA Today* (5 November 2008), http://www.usatoday.com/news/world/2008-11-05-afghanstrikes_N.htm.
[5] Paul Eckert, "Afghan's Karzai Demands U.S. Halt Airstrikes: Report," *Reuters.com, http://www.reuters.com/article/politicsNews/idUSTRE5475R820090508?feedType=RSS &feedName=politicsNews.* President Karzai's demand for a change in US approach is a significant development that could limit future options. Limits to US freedom of action in an environment that places a premium on responsiveness could threaten overall success.

***Emphasize and Re-Orient Air Mobility.*** If COIN is to characterize the preponderant weight of US warfighting effort in the future, an enlarged role for tactical air mobility is implied by the lessons of history. The corporate Air Force and Air Mobility Command (AMC) should undertake a mission review that begins to posture mobility aircraft and airmen for increased roles in distributed sustainment, paratroop delivery, aerial observation, policing/presence operations, and humanitarian support. Mobility weapon systems must be able to perform these missions in areas where insurgents using modern anti-aircraft technologies could contest air superiority. This implies the need to reconsider the fundamentals of organization, training, and equipment for USAF mobility resources. Airlifters should be re-organized in a manner that balances global, centralized airlift with a decentralized, theater focus placing a greater premium on responsiveness than on efficiency. The training of mobility airmen must give greater emphasis to tactical and special operations disciplines and eliminate the "support mentality" that currently characterizes mobility culture. This has been begun, but not genuinely fostered. In the future, tactical airlift is likely to occupy center stage in America's warfighting efforts, and mobility airmen need to get comfortable with operating at the leading edge and under threat. Mobility aircraft must also be equipped for an expanded role in this different fight. Up-to-date and complete self-protection and tactical communications suites should be expeditiously installed across the mobility fleet in anticipation of the expanded roles that are likely to grow from greater COIN involvement. None of these recommendations imply that AMC has not already gotten interested in such initiatives, only that they should be emphasized, expedited, and reinforced if we are to beat the clock and avoid expediency.

***Make Room for Unconventional Thinkers.*** The last Air Force officer to codify a viable theory of airpower was John Warden. The Air Force chose not to promote him to Brigadier General despite a record

that clearly warranted it, mainly because his unconventional manner cut against the prevailing culture of the Air Force at the time he was considered. We must be more forward thinking in our personnel decisions. We must make room for both "thinkers" and "doers." We cannot afford the intellectual bankruptcy that so readily results when we force our officers to make a choice between "being somebody" and "doing something." We must foster the conditions for them to achieve both and remain successful. Today, the institution could use Warden's unconventional approach to thinking about the role and relevance of airpower. Retaining and celebrating officers like Warden and John Boyd would help create constituencies for competing airpower views, fostering a healthy discourse that would help produce the most thoughtful and productive approach to warfighting. As "Blowtorch Bob" Komer presciently observed when reflecting on US operations in Vietnam, military organizations will fight in the ways they have been equipped and prepared to fight.[6] This implies the need to maintain a diverse chorus of airpower voices between wars rather than a mass of voices compelled to sing the same tune. We must be prepared for any manner of fighting, not just MCO, and that implies the need for a more intellectually diverse officer corps to "build in" the sustained drive for a balanced approach.

**Final Thoughts**

Admittedly, this study has been thematically defined by assertions about what airpower *cannot do or should not do* in COIN rather than what it *can do or should do.* But interwoven throughout this study is a consistent theme that should be of great comfort to airmen concerned about the role and relevance of airpower in COIN: properly employed, airpower can multiply the effectiveness of a COIN strategy. Primarily non-kinetic airpower designed to influence populations must

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[6] Robert W. Komer, *The Bureaucracy Does Its Thing: Institutional Constraints on U.S.-GVN Performance in Vietnam* (Santa Monica, CA: RAND, 1972), vi-vii.

characterize the majority of COIN efforts, with kinetic roles against enemy forces occupying a much smaller role. This study contains another subtle note of optimism: when we lucidly consider, recognize, and advertise the responsible limits of what we can accomplish, credibility is enhanced. With greater credibility comes the opportunity for greater involvement. This is important because many of the ways in which airpower can benefit COIN efforts tend to cut against traditional views of war as a contest between "good guys and bad guys." Gaining the latitude to pursue imaginative strategies depends on credibility, which in turn depends on performing as advertised, which depends in turn on openly advertising limits. This should be the approach of strategists as they consider airpower in COIN. Of course, these optimistic notions must be tempered with the realization that airpower can fundamentally undermine a COIN effort if improperly employed. It is value neutral until shaped by the strategist.

The intellectual impetus of this study was the notion that airpower represents an inherent advantage for those who wield it. What this study has demonstrated is that airpower is not an *inherent* advantage, but a *conditional* one that is unlocked only through a deliberate effort. Believing airpower grants an asymmetric advantage is too seductive; it derails the process of critical reflection necessary to affirmatively translate the material advantage of airpower into a substantive warfighting advantage. That translation happens through the development of strategy. It happens when air strategists realize not only that airpower in COIN is best imagined as a scalpel rather than a hatchet, but that it is best to measure twice and cut once. If this study has done nothing more than demonstrate the need for premeditation rather than expediency in air warfare, it has achieved a worthwhile purpose.

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